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THE

TRANSACTIONS

OF THE

AMERICAN MEDICAL ASSOCIATION.

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By a Resolution passed at the session of 1851, the Committee of Publication were instructed to print conspicuously, at the beginning of the volume of the *Transactions*, the following disclaimer:—

"The American Medical Association, although formally accepting and publishing the Reports of the various Standing Committees, holds itself wholly irresponsible for the opinions, theories, or criticisms therein contained, except when otherwise decided by special resolution."

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MINUTES

OF THE

NINETEENTH ANNUAL MEETING

OF THE

AMERICAN MEDICAL ASSOCIATION,

Held in the City of Washington, May 5th, 6th, 7th, 8th, 1868.

THE Association convened at Carroll Hall, on Tuesday, May 5, at 11 A.M., and was called to order by the President, SAMUEL D. GROSS, M.D., of Pennsylvania, assisted by Vice-Presidents ALFRED C. POST, M.D., of New York, JOHN L. ATLEE, M.D., of Pennsylvania, and HORATIO R. STORER, M.D., of Massachusetts.

The Permanent Secretary, WILLIAM B. ATKINSON, M. D., of Pennsylvania, and the Assistant Secretary, J. W. H. LOVEJOY, M. D., of the District of Columbia, were present.

Ex-President H. F. ASKEW, M. D., of Delaware, and ex-Vice-President C. C. Cox, M. D., of Maryland, by request, were seated upon the platform.

The proceedings were opened with prayer by Rev. WM. PINKNEY, D. D., of Washington, D. C.

The Committee of Arrangements, through their Chairman, GRAFTON TYLER, M.D., of the District of Columbia, welcomed the Association in the following remarks:—

"*Mr. President and Gentlemen of the Association:*

"The pleasant duty is assigned me to announce your welcome. After another year spent in useful and laborious professional service, you are again assembled for all the pleasures and all the hopes of a social and a scientific reunion.

"Your coming among us has been anticipated and provided for in the spirit of fraternity and of hospitality; but until this moment, when we see our wishes realized in this vast gathering of repre-

sentatives from every part of our territory assembled before us, we knew not the fervor which inspires us now to greet you as we do, one and all, with the warmest welcome of our hearts. As I see before me representatives from the East, from the West, from the North, and from the South, I feel that the first pleasant promptings of duty overflow in a joyous enthusiasm. Welcome, then, thrice welcome, among us! not as strangers, for the same enchanting power which bid you here binds us to a common brotherhood in science; not as foreigners, for this city, founded by Washington, the 'father of his country,' bearing his immortal name, is the home of all his country's people.

"In greeting you, we also congratulate ourselves not only on your presence here to-day, but upon the prospect of this being the place of your biennial meetings. What more appropriate selection than this centre of the national life, the seat of the national government? You are not more the conservators of the life of an individual than you are of the life of a nation. Medicine, in its philosophy, its precepts, and its practice, is coextensive with the operations of government. It is exalted in the seat of justice, deciding, with inflexible sternness, the fate of innocence or guilt. It is sought and embraced for its indispensable aid not only to the internal welfare, but to the national defence by sea and by land, as well as to its commercial wealth and its progressive civilization. The purposes of our profession are not less important than any which operate near the central power of a great nation, to give it perpetuity and insure its efficiency. What more appropriate selection, then, than this as the depository of the archives and the chief place for the assembling of this national medical congress? Just ten years ago you honored our city with your presence, since which time much has been developed and improved of professional interest among us. Two medical schools vie with each other in honorable emulation, aided by several hospitals, which are advancing to stability in the promotion of the interests of science and of humanity.

"While we can present to you but one institution as commanding in all respects as any of which the older cities can boast, perhaps inferior to none the world ever knew, to harmonize the broken, jarring links of intellect, you will have the rare opportunity to visit the depository of the accumulated gleanings of the battle-field and of the tented hospital—the work of the noble sons of Hippocrates, whose temple, as you will see it there adorned, is more

brilliant in the light of science, and as radiant in the glory of her achievements, as ever Solomon's was with its gorgeous illuminations. As you stand among those sacred relics in this hallowed temple, if associated reminiscences should touch your hearts, or scenes of strife in which you have mingled should rise up before you, the consciousness of having acted not to destroy, but to save; not to torture, but to soothe and comfort; not to wound, but to bind up and stanch the flowing life-blood, to cool the fevered lip, assist the suffering, and solace the dying—will vindicate you as followers of the great physician 'who went about doing good.'

"Does the martial hero rise to the pinnacle of this world's glory over thousands slain upon the battle-field? What greater glory his whose achievements, not only there, but in all his efforts and all his doings, secures alike to friend and foe only solace, comfort, ay, even life itself! The ministers of science, with earnest zeal and hopeful purpose, have made even a country's woes contribute to the entertainment, the instruction, and the good of all her people.

"You are assembled here to-day to consider the most important interests confided to man—the health, the happiness, the social order, the domestic comfort of individuals, of communities, of nations, of the world. I say of the world, for not only individuals, communities, and nations, but all mankind, have received and acknowledged the blessing of American medical science. If we have received from abroad that great boon to man which has saved millions from deformity or death, we have given in turn that anæsthetic agent which, while it aids the efficiency of art, gives to all mankind freedom from pain; ay, not only is the surgeon's knife without this infliction, but the sorrow of woman, now tempered with joy, commands throughout the world a grateful homage to the genius of America.

"In all the efforts of man, nothing has contributed so much to success as the principle of combination, and nothing has more secured the advancement of science than the establishment of associations and societies. The larger part of our knowledge is derived from comparing our own observations with those of others, and by the mutual communication of our thoughts we solve many otherwise insuperable difficulties. I see now before me the distinguished representatives of the universities, the hospitals, the societies, and associations of the cities of every State; I see before me the representatives of the self-reliant, self-sacrificing, and no less honorable and efficient country practitioner; I see before me

the representatives of the army and navy, whose achievements in science cannot be eclipsed by the glory of war. Thus the profession of the whole country becomes associated for combined and harmonious effort in improving the result of their labors. For twenty-one years you have thus met together at great personal sacrifice—though sacrifice is common in your daily avocations, and attends all your paths to success.

"The history of medicine in this country affords nothing, compared with these annual meetings, which has so much stimulated the industry, the generous professional and scientific ardor, the ethical spirit, and useful emulation of its votaries.

"Well may the founders of this Association, who have been permitted to live so long, be this day proud of its record.

"Thank God that he who was '*primus inter pares*' is still spared to give us the joy of his genial presence, and the blessing of his wise counsel and commanding influence; for whatever is now, or may be, recorded in the *Transactions* of this Association—all that is profound in experimental research, all that is ingenious in discovery, all that is sublime in speculative science, all that is excellent for practical good—flowing to this common receptacle from the incitement of his forethought and the inspiration of his genius, while they distinguish their authors, become enduring monuments of his fame.

"Under the guidance of well-disciplined minds, this Association, strictly national in its organization, and only professional in its aims and purposes, has singularly preserved its integrity, and, in confining its action to these purposes, has given an example worthy of imitation.

"It is composed of the young and the old, of every positional grade—embracing always the great, the wise, and the illustrious—all of whom, as if inspired for the advancement and the dignity of the profession, though representing different States with clashing opinions distinguishing them one from another, though divided in religious and political sentiment, and, we may say, even in views of social order, yet coming together as a common brotherhood in science, uniting in one grand concert to celebrate her truths, and in laying upon her altars the free gifts and never-fading offerings of wisdom and of humanity.

"While we feel the spirit of this sublime inspiration, we bid you again, one and all, the earnest welcome of our hearts."

Dr. TYLER then offered the following programme for the meetings and entertainment of the Association:—

The meetings of the Association will be held in Carroll Hall, commencing on Tuesday, May 5, at 11 o'clock A.M.

The Sections will meet in the same building at 3 o'clock P.M., as follows:—

Chemistry and Materia Medica—In gallery of main hall.
Practical Medicine and Obstetrics—In middle room of basement.
Surgery and Anatomy—In main hall.
Meteorology, Medical Topography, and Epidemic Diseases—In southwest room of basement.
Medical Jurisprudence, Hygiene, and Physiology—In northeast room of basement.
Psychology—In southeast room of basement.

Entertainments and Receptions.

Tuesday, May 5.

The Association will call upon the President of the United States between 8 and 9 P.M.

Chief-Justice S. P. Chase will receive at 9 P.M. Residence, corner of Sixth Street West and E Street North.

Hon. Schuyler Colfax, Speaker of the House of Representatives, will receive at 9 P.M. Residence, No. 7 President's Square.

Wednesday, May 6.

Army Medical Museum Entertainment from 6 till 10 P.M. Tenth Street West, between E and F North.

Senator Edwin D. Morgan, of New York, will receive at 9 P.M. Residence, corner of Fifteenth Street West and I Street North.

Thursday, May 7.

Capitol lighted and Dome illuminated from 8 till 9 P.M.

Hon. Richard Wallach, Mayor of Washington, will receive at 9 P.M. Residence, corner of New Jersey Avenue and I Street North.

The Committee of Arrangements reported the following as duly accredited delegates and permanent members, comprising a total of 324:—

ALABAMA.

Montgomery Med. and Surgical Society,	WM. O. BALDWIN, J. S. WEATHERLY.
Medical Association of Alabama,	R. F. MICHEL.
Talladega Medical Society,	JOE H. JOHNSON.

CONNECTICUT.

Connecticut Medical Society,	B. H. CATLIN.
Middlesex County Med. Society,	EDWIN BIDWELL.
New Haven County Med. Society,	L. N. BEARDSLEY, JOEL CANFIELD, R. F. STILLMAN.
New Haven Med. Association,	HENRY A. CARRINGTON, LEVI IVES.
New London Co. Med. Society,	ASHBEL WOODWARD.

DELAWARE.

Permanent Member,	HENRY F. ASKEW.

DISTRICT OF COLUMBIA.

Clinico-Pathological Society,	F. A. ASHFORD, D. W. PRENTISS, BODISCO WILLIAMS.
Columbia Hospital and Lying-in Asylum,	J. H. THOMPSON.
Freedmen's Hospital,	J. H. BUSHNELL, P. GLENNAN.
Government Hosp. for the Insane,	C. H. NICHOLS.
Medical Association of the District of Columbia,	L. J. DRAPER, WM. B. DRINKARD, DANIEL R. HAGNER, N. S. LINCOLN, H. LINDSLY, THOS. F. MAURY, W. G. H. NEWMAN, ARMISTEAD PETER, SAMUEL J. RADCLIFF, NOBLE YOUNG, JOS. T. YOUNG.

Medical Society of the District of Columbia,	D. W. Bliss, M. V. B. Bogan, Jos. Borrows, J. W. Bulkley, G. M. Dove, Johnson Eliot, Thos. Emory, Theo. Hansmann, Jas. W. H. Lovejoy, Louis Mackall, Jr., Thos. Miller, John C. Riley.
Med. Dept. Howard University,	Jos. Taber Johnson.
Med. Dept. Georgetown College,	Flodoardo Howard, Jas. E. Morgan, Robert Reyburn.
National Medical College, Washington,	Wm. P. Johnston, Alex. Y. P. Garnett.
Providence Hospital,	J. Ford Thompson, Grafton Tyler.
Permanent Members,	Thos. Antisell, Chas. Allen, Samuel S. Bond, R. C. Croggon, W. J. C. Duhamel, G. P. Fenwick, C. M. Ford, A. F. A. King, Wm. Lee, S. L. Loomis, Robert King Stone, S. J. Todd, Jos. M. Toner.

GEORGIA.

Atlanta Medical College,	H. V. M. Miller.
Georgia Medical Society,	R. D. Arnold, Geo. G. Crawford.

ILLINOIS.

Chicago Medical College,	N. S. DAVIS.
Cook County Hospital,	JOS. A. HILDRETH.
Illinois State Medical Society,	E. P. COOK.
St. Luke's Hospital (Chicago),	SAMUEL J. JONES.

INDIANA.

Indianapolis Acad. of Medicine,	THAD. M. STEVENS.
Indiana State Medical Society,	GEO. SUTTON.
Wayne County Medical Society,	JAS. F. HIBBERD.
Permanent Member,	THEOPHILUS PARVIN.

IOWA.

Iowa and Illinois Central District Medical Association,	THOMAS J. ILES.
Medical Dept. of Iowa University,	H. T. CLEAVER.

KENTUCKY.

Kentucky State Medical Society,	GEO. BEELER.

MAINE.

Maine Medical Association,	N. P. MONROE, JAS. C. WESTON.

MARYLAND.

Alleghany County Med. Society,	C. H. OHR, G. ELLIS PORTER.
Baltimore Medical Association,	ABRAM B. ARNOLD, C. C. COX, LEWIS M. EASTMAN, A. HARTMAN, THOS. H. HELSBY, CHAS. H. JONES, H. R. NOEL, EDW. WARREN.
Baltimore Pathological Society,	GEO. D. BEATTY, FRED. E. CHATARD, JR, F. GARRETSON, WESCOM HUDGIN, JAS. A. STEWART, W. C. VAN BIBBER.
Baltimore Special Dispensary,	E. LLOYD HOWARD.

Harford County Medical Society,	WM. J. EVANS, JOHN M. FINNEY, SILAS B. SILVER.
Medical and Chirurgical Faculty of Maryland,	J. J. COCKRILL, J. R. W. DUNBAR, W. STUMP FORWOOD, JUDSON GILMAN, H. A. INLOES, PERRY S. KINNEMON, D. I. MCKEW, JOHN F. MONMONIER, G. E. MORGAN, JOHN MORRIS, D. A. O'DONNELL, SAMUEL F. POWELL, SAMUEL P. SMITH, B. TITCOMB.
University of Maryland,	CHRISTOPHER JOHNSTON, NATHAN R. SMITH.
Washington University,	JOSEPH P. LOGAN, J. J. MONMON.
Washington Univ. Dispensary,	MARTIN P. SCOTT.
Permanent Members,	J. W. P. BATES, THOMAS C. HOPKINS, O. S. MAHON.

MASSACHUSETTS.

Franciscan Hospital for Women (Boston),	HORATIO R. STORER.
Massachusetts Medical Society,	GEO. D. COLONY, J. C. DORR, C. C. FIELD, B. F. HEYWOOD, ALFRED HITCHCOCK, FOSTER HOOPER, FREDERICK H. HOOPER, HENRY A. MARTIN, JOS. MURPHY, JEFFERSON PRATT, CHAS. D. STICKNEY, CHAS. L. SWASEY, WM. WORKMAN.

Middlesex South District Medical Society,	AUGUSTUS MASON, JOHN W. WILLIS.
Plymouth District Med. Society,	NATHANIEL DOWNES.
Thurber Medical Association,	J. ALLEN FAY.
Permanent Members,	GEO. F. BIGELOW, MARSHALL CALKINS, JOHN W. GRAVES, JOHN F. JARVIS.

MICHIGAN.

Permanent Member,	A. B. PALMER.

NEW HAMPSHIRE.

New Hampshire Medical Society,	GEO. B. TWITCHELL.

NEW JERSEY.

Cumberland County Med. Society,	S. G. CATTELL.
Gloucester County Med. Society,	JOHN R. SICKLER.
Hunterdon County Med. Society,	ISAAC S. CRAMER.
Medical Society of New Jersey,	WM. ELMER, JONATHAN HAVENS, SAMUEL LILLY, T. J. THOMASON.
Sussex County Medical Society,	C. R. NELDEN.
Permanent Members,	GABRIEL GRANT, EZRA M. HUNT.

NEW YORK.

Albany City Hospital,	JAS. H. ARMSBY.
Albany Medical College,	ALDEN MARCH.
Buffalo Medical Association,	C. C. F. GAY.
Cayuga County Med. Society,	T. S. BRINKERHOFF.
Charity Hospital of New York,	WALTER R. GILLETTE, ERSKINE MASON.
Chemung County Med. Society,	T. H. SQUIRE.
Chenango County Med. Society,	E. L. ENSIGN.
East River Medical Association,	JOHN BURKE.
King's County Medical Society,	HOMER G. NEWTON, GEO. K. SMITH.
Lake Erie Medical Association,	H. R. ROGERS.
Livingston County Med. Society,	SAMUEL G. ELLIS.
Medical Association, Eastern District of Brooklyn,	NELSON L. NORTH.

Medical Society of the State of New York,	JOSEPH BATES, JAMES L. BANKS, THOS. C. BRINSMADE, J. K. CHAMBERLAYNE, H. W. DEAN, H. N. EASTMAN, AUGUSTUS L. SAUNDERS, SAMUEL G. WOLCOTT.
New York Academy of Medicine,	GURDON BUCK, JOHN P. GARRISH, ELISHA HARRIS, SAMUEL T. HUBBARD, ERNEST KRACKOWIZER, JAMES R. LEAMING, GOUVERNEUR M. SMITH, WM. FAULDS THOMS, EVERARDUS B. WARNER.
New York County Med. Society,	NATHAN BOZEMAN, LOUIS ELSBERG, FRANK H. HAMILTON, ABRAHAM JACOBI, JOHN MESSENGER, EDW. R. PEASLEE, JOHN C. PETERS, BENJ. J. RAPHAEL, LEWIS A. SAYRE, EDWARD H. M. SELL, JOHN SHRADY, CHAS. F. TAYLOR, WM. R. WHITEHEAD, GUSTAVUS S. WINSTON, JOS. WORSTER.
New York Medical Association,	JOEL FOSTER.
New York Medico-Legal Society,	THOS. S. BAHAN.
New York Pathological Society,	W. B. BIBBINS, ELLSWORTH ELIOT.
N. Y. State Emigrant Hospital,	ERNEST SCHILLING.
Niagara County Medical Society,	B. L. DELANO.
Oneida County Medical Society,	HENRY N. PORTER.
Orange County Med. Society,	N. ROE BRADNER.
Rensselaer County Med. Society,	THOS. B. HEINSTREET.

Ulster County Medical Society,	A. Crispell.
University Medical College,	Alfred C. Post.
West Chester Medical Society,	Jas. Hart Curry.
Permanent Members,	Hiram Corliss, R. H. Gilbert, Chas. A. Lee, Lothar Voss.

OHIO.

Bellefontaine Medical Society,	Wm. Thomas.
Cincinnati Academy of Medicine,	Jas. H. Bucknor, A. E. Heighway, R. R. McIlvaine, W. H. Mussey, John A. Murphy, Albert Rosenfeld, Jos. P. Walker, J. D. Webb.
Cincinnati Medical Library Association,	Thos. H. Kearney.
Medical College of Ohio,	Cornelius G. Comegys, M. B. Wright.
Miami Medical College,	Geo. Mendenhall.
Montgomery Co. Med. Society,	Thos. L. Neal, J. C. Reeve.
Scioto County Medical Society,	C. M. Finch, A. B. Jones.
Permanent Members,	B. S. Brown, A. Dunlap, G. F. Mitchell, O. D. Norton, E. Sinnett.

PENNSYLVANIA.

Allegheny County Med. Society,	S. N. Benham, Wm. H. Daly, Wm. F. Knox, N. McDonald, A. M. Pollock, Thos. W. Shaw.

Beaver County Medical Society,	J. E. JACKSON.
Berks County Medical Society,	JAS. M. MATTHEWS, HIESTER M. NAGLE.
Blair County Medical Society,	JOHN FEAY.
Bucks County Medical Society,	JOHN DYER.
Chester County Medical Society,	W. B. BRINTON.
College of Physicians of Philadelphia,	WASHINGTON L. ATLEE, D. FRANCIS CONDIE, EMIL FISCHER, L. P. GEBHARD, EDW. HARTSHORNE, WM. HUNT, SAMUEL LEWIS, J. H. PACKARD.
Crawford County Med. Society,	S. S. BATES, JOHN T. RAY.
Dauphin County Med. Society,	WM. W. RUTHERFORD, S. S. SCHULTZ.
Indiana County Med. Society,	WM. ANDERSON.
Jefferson Medical College (Philadelphia),	S. D. GROSS, B. HOWARD RAND.
Lake Erie Medical Society,	G. W. BARR.
Lancaster City and County Med. Society,	JOHN L. ATLEE.
Medical Society of the State of Pennsylvania,	P. B. BREINIG, JAS. S. CARPENTER, A. H. FISH, J. H. GROVE, ALEX. STEWART, W. MURRAY WEIDMAN.
Northampton Co. Med. Society,	TRAILL GREEN.
Northern Dispensary of Phila.,	F. W. LEWIS.
Northern Dispensary (Medical Board) of Philadelphia,	LEMUEL J. DEAL.
Northern Medical Association,	JAMES COLLINS.
Perry County Medical Society,	JOSEPH SWARTZ.
Philadelphia County Med. Society,	WM. B. ATKINSON, ROBERT BURNS, WM. L. KNIGHT, BENJAMIN LEE, WM. MAYBURRY, A. NEBINGER.

Philadelphia Hospital,	WM. H. PANCOAST.
Union Med. Association of Philadelphia,	S. R. MORRIS, LOUIS GRUEL.
Permanent Members,	BENJ. M. COLLINS, JAMES W. KERR, R. J. LINDERMAN.

RHODE ISLAND.

Providence Medical Association,	GEO. P. BAKER, EDWARD M. HARRIS.
Rhode Island Medical Society,	OTIS BULLOCK, WM. T. BULLOCK, SAMUEL S. DRURY, HOWARD W. KING, HORACE G. MILLER.
Permanent Member,	JOHNSON GARDNER.

TENNESSEE.

Memphis Medical Association,	JAS. M. KELLER, J. S. WHITE.
Tennessee State Medical Society,	B. P. CLARK, PAUL F. EVE.
Permanent Member,	B. B. LENOIR.

VERMONT.

Vermont Medical Society,	SUMNER PUTNAM.
Permanent Member,	CHARLES S. DOWNES.

VIRGINIA.

Lynchburg Medical Association,	M. P. CHRISTIAN, W. O. OWEN.

WEST VIRGINIA.

West Virginia Medical Society,	ROBERT H. CUMMINS, J. M. LAZZELL.
Permanent Member,	E. A. HILDRETH.

ARMY AND NAVY.

Medical Department U.S. Army,	J. S. BILLINGS, B. F. CRAIG, EDWARD CURTIS, GEO. A. OTIS, J. J. WOODWARD.

Medical Department U. S. Navy, { GEO. CLYMER, CHAS. EVERSFIELD, CHAS. D. MAXWELL, WM. M. WOOD.

The following gentlemen were elected during the session as members by invitation:—

J. Y. CANTWELL,	Decatur, Ala.
ENOCH PEARCE,	Steubenville, Ohio.
S. D. COFFIN,	Bloomington, Ill.
SIMON FITCH,	Portland, Me.
L. A. JAMES,	Cincinnati, Ohio.
THOMAS BOND,	Choctaw Nation, Ind. Ter.
WM. MARSDEN,	Quebec, Canada.
Prof. JOHN GAMGEE,	London, England.
X. T. BATES,	New York.
W. F. PERCIVAL,	Aiken, S. C.

The Permanent Secretary called the roll.

On motion of Dr. R. D. ARNOLD, of Georgia, Dr. W. F. PERCIVAL, of Aiken, S. C., being present from a section without a medical organization, was made a member by invitation.

Dr. JAS. F. HIBBERD, of Indiana, moved to suspend the regular order of business, in order that the President's address might be postponed till Wednesday. Lost.

Vice-President JOHN L. ATLEE having taken the chair, the President delivered the Annual Address.

On motion, the thanks of the Association were presented to the President for his able and very interesting address, and a copy was requested for publication.

On motion of Dr. CHAS. A. LEE, of New York, a committee was appointed to examine the address and report on the subjects suggested therein.

Committee: Drs. C. A. LEE, of New York, D. FRANCIS CONDIE and JOHN L. ATLEE, of Pennsylvania.

Reports of Committees being next in order, they were called, with the following result:—

On Ophthalmology, Dr. JOS. S. HILDRETH, of Illinois, Chairman, presented a report, which was referred to the Section on Surgery and Anatomy.

On Insanity, Dr. CHAS. A. LEE, of New York, Chairman, presented a report, which was referred to the Section on Psychology.

On Provision for the Chronic Insane, the same Chairman presented a report by Dr. J. B. CHAPIN, of New York, on this subject, which was similarly referred.

On Climatology and Epidemics, reports were presented by Dr. D. F. CONDIE for Pennsylvania, by Dr. T. J. HEARD for Texas, by Dr. T. ANTISELL for the District of Columbia, and by Dr. E. A. HILDRETH for West Virginia, which were referred to the Section on Meteorology, Medical Topography, and Epidemic Diseases.

On Clinical Thermometry in Diphtheria, Dr. JOS. G. RICHARDSON, of New York, Chairman, reported progress, and was, on motion, continued.

On the Treatment of Disease by Atomized Substances, Dr. A. G. FIELD, of Iowa, Chairman. No report.

On the Ligation of Arteries, Dr. BENJ. HOWARD, of New York, Chairman, asked to be discharged, which was granted.

On the Treatment of Club-Foot without Tenotomy, Dr. LEWIS A. SAYRE, of New York, Chairman, presented a report, which was referred to the Section on Surgery and Anatomy.

On the Radical Cure of Hernia, Dr. G. C. BLACKMAN, of Ohio, Chairman. No report.

On Operation for Harelip, Dr. A. HAMMER, of Missouri, Chairman, reported progress, and was, on motion, continued.

On Errors of Diagnosis in Abdominal Tumors, Dr. G. C. E. WEBER, of Ohio, Chairman. No report.

On Surgical Diseases of Women, Dr. THEOPHILUS PARVIN, of Indiana, Chairman. No report.

On Leakage of Gas-Pipes, Dr. J. C. DRAPER, of New York, Chairman. No report.

Voluntary communications were presented "On the Use of Disinfectants in Scarlatina," by Dr. NELSON L. NORTH, of New York, and "On the Prevention of Cholera and the Bowel Affections of Summer," by Dr. N. S. DAVIS, of Illinois, and referred to the Section on Meteorology, etc.

The Committee on Rank of Medical Men in the Navy, Dr. N. S. DAVIS, of Illinois, Chairman, presented their report, which was read, and referred to the Committee of Publication.

On motion, the Committee were continued.

The Committee on Prize Essays reported that none of the four essays presented were regarded as worthy of the prizes offered, and offered a resolution that the two prizes be consolidated to make one prize of two hundred dollars.

The report was, on motion of Dr. CONDIE, of Pennsylvania, approved.

As the resolution would be an amendment to the By-Laws, on motion of Dr. J. L. ATLEE, of Pennsylvania, its further consideration was indefinitely postponed.

The Committee on Medical Ethics.—A report from this Committee was presented from Dr. H. I. BOWDITCH, of Massachusetts. Dr. BOWDITCH had become chairman by the death of two of his colleagues, Drs. L. A. SMITH, of New Jersey, and WORTHINGTON HOOKER, of Connecticut. He had been unable to elicit any replies from his two other colleagues, and therefore was compelled to act in his individual capacity. Two subjects had been referred to this Committee at the last meeting—the status of female practitioners of medicine, and the resignation of JULIUS HOMBERGER, of New York. He strongly advocated the recognition of regularly educated and otherwise well qualified female physicians. The report closed with the following resolutions:—

Resolved, That the question of sex has never been considered by this Association in connection with consultations among medical practitioners, and that, in the opinion of this meeting, every member of this body has a perfect right to consult with any one who presents the "only presumptive evidence of professional abilities and acquirements" required by this Association, viz., "a regular medical education."

Resolved, That the resignation of Dr. JULIUS HOMBERGER, of New York, be accepted, and that all further consideration of him and of his peculiar methods of procuring practice be indefinitely postponed.

After much debate, on motion, the first resolution was made the special order of business for Wednesday, at 12 M.

On motion, the second resolution was laid on the table.

On motion of Dr. N. S. DAVIS, the report on *medical education* was made the special order of business for Wednesday, at 10 A.M., and it was agreed that the report on *medical literature* should immediately follow it.

Charges were presented in writing, by two members, against Dr. A. G. FIELD, of Iowa, and, on motion, were referred to the Committee on Medical Ethics, with instructions to report at the present session.

The President appointed as the Committee on Medical Ethics, Drs. D. FRANCIS CONDIE, of Pennsylvania, N. S. DAVIS, of Illinois,

A. C. POST, of New York, H. F. ASKEW, of Delaware, and W. O. BALDWIN, of Alabama.

On motion of Dr. SAYRE, the case of JULIUS HOMBERGER was taken from the table and referred to the Committee on Medical Ethics.

On motion, the Association adjourned until Wednesday, at 9 A.M.

SECOND DAY.

WEDNESDAY, MAY 6.

The Association met at 9 A.M.

Dr. SAMUEL D. GROSS, President, in the chair.

The Permanent Secretary read the minutes of the preceding day, which were approved.

Dr. WM. MARSDEN, of Quebec, was, on motion, elected a member by invitation, and was invited to a seat upon the platform.

The Permanent Secretary read a letter from Dr. D. W. YANDELL, of Kentucky, a Vice-President of the Association, expressing regret at his inability to be present at the session; it was ordered on file.

A communication from a meeting of the medical profession of New Orleans, inviting the Association to hold its next session in that city, was read, and laid on the table.

Vice-President J. L. ATLEE having taken the chair, on motion of President GROSS, Prof. NATHAN R. SMITH, M.D., of Maryland, was invited to a seat upon the platform.

The Committee on Topics in the President's Address reported through the Chairman, Dr. C. A. LEE, of New York. The report was accepted, and referred to the Committee of Publication.

Dr. LEE promised, on behalf of the Committee, to present suitable resolutions for the action of the Association prior to adjournment.

The Committee on Plan of Organization, Dr. C. C. COX, of Maryland, Chairman, presented and read their report, proposing many changes in the Constitution, etc.

On motion, the report was accepted, and ordered to be printed with the *Transactions*, to be acted upon next year, under the rules governing amendments.

A recess having been taken, to allow the delegations from each State to select their member of the Committee on Nominations, on reassembling, the Permanent Secretary announced the following as the Committee on Nominations:—

Maine, N. P. MONROE; New Hampshire, G. B. TWITCHELL; Vermont, SUMNER PUTNAM; Massachusetts, H. R. STORER; Rhode Island, OTIS BULLOCK; Connecticut, ASHBEL WOODWARD; New York, J. H. ARMSBY; New Jersey, SAMUEL LILLY; Pennsylvania, A. M. POLLOCK; Delaware, H. F. ASKEW; Maryland, THOMAS H. HELSBY; Virginia, W. O. OWEN; West Virginia, R. H. CUMMINS; Georgia, R. D. ARNOLD; Ohio, W. H. MUSSEY; Illinois, JOS. S. HILDRETH; Kentucky, GEO. BEELER; Tennessee, J. M. KELLER; Alabama, J. S. WEATHERLY; Indiana, GEO. SUTTON; Iowa, H. T. CLEAVER; Michigan, A. B. PALMER; District of Columbia, F. HOWARD; U. S. Army, GEO. A. OTIS; U. S. Navy, CHAS. EVERSFIELD.

On motion of Dr. B. H. CATLIN, of Connecticut, the Committee were directed to assemble immediately.

Dr. G. TYLER, Chairman of the Committee of Arrangements, stated that, by a misunderstanding, the reception of Chief-Justice CHASE had not been held on Tuesday evening, and he would receive the delegates on Thursday evening.

A paper on climatology of a part of South Carolina was offered by Dr. PERCIVAL, and referred to the Section on Meteorology, etc.

An apparatus for the administration of anæsthetics was presented by Dr. F. H. HAMILTON, of New York, and referred to the Section on Surgery, etc.

Prof. JOHN GAMGEE, of the Albert Veterinary College, London, was introduced by the President, and, on motion, was made a member by invitation. He was invited to a seat upon the platform, and responded in an interesting address upon the mutual relations existing between medical and veterinary science.

On motion of President GROSS, Senator DRAKE, of Missouri, who was observed upon the floor, was invited to a seat upon the platform, and entertained the Association with some remarks in allusion to his connection with the medical art, through his father, the late Prof. DANIEL DRAKE, M. D.

Dr. A. B. PALMER, of Michigan, Chairman of the Committee on Medical Education, read their report, which, on motion of Dr. CONDIE, was referred to the Committee of Publication.

Dr. N. S. DAVIS, having obtained leave of the Association, stated that, with the view of maturing their plans, the Committee of the Convention of Schools had addressed the medical colleges of the country regarding the proposed changes, etc., and that evident progress was being made. Several schools had indorsed the plan

agreed upon by the convention of last year. For these reasons no convention was called this year to discuss the matter.

Dr. PALMER, by leave of the Association, stated that several gentlemen had expressed the view that the programme of study was too revolutionary. He was, however, willing to correct any errors of statement in his report.

The Committee on Medical Literature, Dr. GEO. MENDENHALL, of Ohio, Chairman, presented and read their report, which was referred to the Committee of Publication.

On motion of Dr. JOHN L. ATLEE, of Pennsylvania, the President was requested to appoint seven delegates to attend the next session of the Canadian Medical Association, at Montreal, in September next.

On motion of Dr. MAYBURRY, of Pennsylvania, the President was unanimously nominated as one of said delegates.

Subsequently the President announced that he had appointed as delegates to the Canadian Medical Association—Drs. C. C. COX, of Maryland; JOHN L. ATLEE, of Pennsylvania; N. S. DAVIS, of Illinois; CHAS. A. LEE, of New York; GRAFTON TYLER, of the District of Columbia; and W. M. WOOD, of the U. S. Navy.

Voluntary communications were presented as follows:—

"On the Best Methods of Treatment for Different Forms of Cleft Palate," by Dr. WM. R. WHITEHEAD, of New York. Referred to the Section on Surgery, etc.

"Remarks on some of the Operations for Vesico-Vaginal Fistule, with an Account of a New Self-retaining Speculum, and a New Mode of Securing the Patient," by Dr. NATHAN BOZEMAN, of New York. Referred to the same Section.

"The Treatment of Syphilis by Hypodermic Injection," by Dr. L. ELSBERG, of New York. Referred to the same.

"A Series of Plans for the Collection and Statistical Arrangement of Facts in regard to Climatological and Sanitary Conditions of the various States," by Dr. W. F. THOMS, of New York. Referred to the Section on Meteorology, etc.

"A New Method of Reconstructing the Lower Lip after Removal by Disease," by Dr. GURDON BUCK, of New York. Referred to the Section on Surgery, etc.

Dr. ATKINSON stated that Dr. BENJ. LEE, of Philadelphia, had printed copies of a paper entitled "Differential Diagnosis of Spinal Arthrochondritis," which were at the disposal of the members.

The resolution of the Committee on Medical Ethics, on female physicians, was declared in order, and remarks were made by Drs.

W. L. ATLEE and D. F. CONDIE, of Pennsylvania, and N. S. DAVIS, of Illinois.

On motion of Dr. DAVIS, its further consideration was indefinitely postponed.

On motion of Dr. J. L. ATLEE, the vote referring the resolution in the case of J. HOMBERGER to the Committee on Ethics was reconsidered.

Dr. SAYRE moved that the name of this member be stricken from the roll of members.

A motion to lay on the table was lost.

Dr. SAYRE explained at length the position of the person in question, and read a letter from a prominent physician in New Orleans, corroborative of his statement that Dr. H. was an extensive advertiser in the newspapers.

Dr. E. L. HOWARD, of Maryland, moved to amend the motion of Dr. SAYRE so as to refer the matter to a special committee of three.

Remarks were made by Drs. H. R. NOEL, of Maryland, G. TYLER, of the District of Columbia, B. J. RAPHAEL, of New York, DAVIS, of Illinois, and PALMER, of Michigan, when, on motion of Dr. RAPHAEL, the amendment was amended by making the resolution to read that Dr. JULIUS HOMBERGER be expelled.

After which the resolution as amended was adopted by a large majority, and Dr. HOMBERGER was declared expelled from membership.

Dr. A. HARTMAN, of Maryland, offered the following resolutions from the Baltimore Medical Association:—

"*Whereas*, The third paragraph of the first article of the Code of Ethics of the American Medical Association expressly declares it to be "derogatory to the dignity of the profession to resort to public advertisements, inviting the attention of individuals affected with particular diseases;" and

"*Whereas*, Certain members of the medical profession in the city of Baltimore, who are permanent members of the American Medical Association, have permitted their names to appear in the daily newspapers, indorsing the qualifications and professional character of a foreign specialist who has recently settled here; therefore,

"*Resolved*, That by such conduct these gentlemen have been accessory to a violation of professional ethics, and guilty of an unwarranted and unjustifiable discrimination against those mem-

bers of the profession who are quietly, legitimately, and unostentatiously prosecuting the respective branches of medical specialism.

"*Resolved*, That it is the sense of the Baltimore Medical Association that either the above paragraphs of the Code of Ethics should be so modified as to allow our own professional brethren who are engaged in the practice of specialties to advertise, and thus be placed on an equal footing with the foreign specialist, who is too often a mere adventurer whom chance has thrown among us; or those gentlemen who have permitted the use of their names to swell the patronage of a specialist, to the injury of equally deserving members of the profession in our city, should be compelled to withdraw their names from such advertisements.

"*Resolved*, That the delegates to the American Medical Association from this society be instructed to lay this matter, so vital to the dignity and honor of the profession, before that body at the earliest possible moment."

After much discussion by Drs. J. L. ATLEE, GROSS, and others, the subject was referred to the Committee on Medical Ethics.

On motion, the Association adjourned until Thursday, at 9 A.M.

THIRD DAY.

THURSDAY, MAY 7.

The Association met at 9 A.M.

The President, Dr. GROSS, in the chair.

The Permanent Secretary read the minutes of the preceding day, which were approved.

The Permanent Secretary read a letter from Dr. C. BOYLE, inviting the Association to hold its next session at Farquhar White Sulphur Springs, Virginia. Referred to the Committee on Nominations.

The report of the Committee of Publication was read by the Permanent Secretary, as also that of the Treasurer, the latter showing a balance in favor of the Association of $83.92. On motion, they were both accepted, and referred to the Committee of Publication for insertion in the *Transactions*.

The Committee on Nominations, through their Chairman, Dr. R. D. ARNOLD, of Georgia, reported in part, as follows:—

Place of Meeting—New Orleans.
Time—May.

OFFICERS FOR 1869.

PRESIDENT.

WILLIAM O. BALDWIN, *of Alabama.*

VICE-PRESIDENTS.

GEORGE MENDENHALL, *of Ohio.*
NOBLE YOUNG, *of the District of Columbia.*
N. P. MONROE, *of Maine.*
S. M. BEMISS, *of Louisiana.*

TREASURER.

CASPAR WISTER, *of Pennsylvania.*

Committee of Publication.—FRANCIS G. SMITH, Jr., of Pennsylvania, Chairman; WILLIAM B. ATKINSON, of Pennsylvania; H. F. ASKEW, of Delaware; RICHARD M. COOPER, of New Jersey; J. W. H. LOVEJOY, of the District of Columbia; WILLIAM MAYBURRY and CASPAR WISTER, of Pennsylvania.

On motion, the report was adopted unanimously.

Dr. WM. MAYBURRY, of Pennsylvania, offered the following amendment to the plan of organization:—

Add to Article III., Standing Committees, a new section, as follows: "No report purporting to emanate from any committee shall be received unless it be signed by a majority of its members."

The amendment was laid over for action next year.

Dr. THOS. C. BRINSMADE, of New York, offered the following, in behalf of the New York State Medical Society:—

"*Resolved,* That the chairman of the delegates from this Society to the American Medical Association be requested to present to said Association, as the desire of the Medical Society of the State of New York, the following resolution, and to urge its adoption:—

"*Resolved,* That the faculties of the several medical colleges of the United States be recommended to announce explicitly in their annual commencement circulars and advertisements that they will not receive certificates of time of study from irregular practitioners, and that they will not confer the degree upon any one who may acknowledge his intention to practise in accordance with any exclusive system."

On motion, the resolution was unanimously adopted.

Dr. ANTISELL, of the District of Columbia, made some remarks on medical education, and moved that it be made the special order of business at noon.

After debate by Drs. COMEGYS, B. H. RAND, of Pennsylvania, and DAVIS, it was lost.

On motion of Dr. ALDEN MARCH, of New York, the delegates who attended the International Medical Congress at Paris last August were requested to report in detail.

Dr. J. M. TONER, of the District of Columbia, offered the following resolution, which, as it would require an amendment to the Constitution, was laid over till next year:—

Resolved, That hereafter the annual sessions of this Association shall continue four days, and that two of the evenings—namely, Wednesday and Thursday—shall be devoted to the general business of the Association.

Dr. POST, of New York, announced the terms of the "O'Reilly Prize," and called the attention of the members to it.

Dr. BRINSMADE, in behalf of the delegates to the International Medical Congress, announced that a report was in progress of preparation, and would be furnished to the Committee of Publication.

The Committee on Medical Ethics reported as follows:—

"The Committee on Medical Ethics, to which were referred the charges against Dr. A. G. FIELD, of Iowa, with instructions to report at this meeting, respectfully report that inasmuch as it does not appear that the accused has had any notice that said charges would be preferred against him at this meeting of the Association, therefore your Committee respectfully ask leave to defer making their final report on the case until the next annual meeting of the Association, that they may duly notify Dr. FIELD, and hear what he has to say in his defence.

D. FRANCIS CONDIE, H. F. ASKEW,
N. S. DAVIS, ALFRED C. POST.

WASHINGTON, D. C., May 7, 1868."

The report was accepted, and the request granted.

Dr. C. G. COMEGYS, of Ohio, offered the following, which was adopted:—

Resolved, That the American Medical Association refers the whole subject of medical education to the faculties of the regular medical colleges of the nation, pledging itself to adopt and enforce any system or plan that may be agreed upon by two-thirds of all recognized medical colleges.

Resolved, That this resolution be referred to the Committee

already acting in this matter, and they are requested to report within two years from this session.

The following voluntary communications were presented:—

"Investigations upon Pyæmia, with Observations upon Associated Diseases, supervening upon Gunshot Wounds," by Dr. Jos. JONES, of Tennessee. Referred to the Section on Surgery, etc.

"Albinism in the Negro Race," by the same author. Referred to the Section on Physiology, etc.

"A Safe and Effectual Operation for the Radical Cure of Varicocele," by Dr. PAUL F. EVE, of Tennessee. Referred to the Section on Surgery, etc.

"A Case of the Extirpation of a Scirrhous Uterus," by Dr. A. B. JONES. Similarly referred.

"A New Remedy for Amenorrhœa," by Dr. JOHN P. GARRISH, of New York. Referred to the Section on Practical Medicine and Obstetrics.

"Report of the Committee on the Cultivation of the Cinchona Tree in the United States," by Dr. J. M. TONER, of the District of Columbia, Chairman. Referred to the Section on Chemistry and Materia Medica.

Dr. LEE, Chairman of the Committee on the President's Address, offered the following resolutions:—

1. *Resolved*, That the Publishing Committee are hereby invested with plenary power in regard to all papers not read before the Association or in the Sections, to publish or not, as may seem expedient.

2. *Resolved*, That a committee of three be appointed by the Chair to take into consideration the subject of the appointment of a commissioner in each judicial district or circuit, whose duty it shall be to aid in the examination of witnesses in every trial involving medico-legal testimony, and to report at the next meeting of the Association.

3. *Resolved*, That a committee be appointed to report next year in regard to the subject of an annual register of the regular profession in the United States, and in the mean time to take necessary measures to carry the plan into effect.

4. *Resolved*, That a committee be appointed to take into consideration the subject of the best mode of providing a fund for the relief of widows and orphans of deceased physicians, and report to the Association at the next meeting.

5. *Resolved*, That a committee of three be appointed to take into

consideration the subject of the establishment of veterinary colleges, and report at our next meeting.

6. *Resolved,* That all hospitals and public institutions for the care and treatment of the sick should have educated, well-trained nurses only; that this Association would strongly recommend the establishment in all our large cities of nurse-training institutions.

After some debate, the first resolution was rejected. The second, third, fourth, and fifth were adopted. On motion of Dr. W. B. BIBBINS, of New York, the sixth was referred to a special committee consisting of Drs. S. D. GROSS, of Pennsylvania, ELISHA HARRIS and CHAS. A. LEE, of New York, to report next year.

On motion of Dr. D. I. MCKEW, of Maryland, it was

Resolved, That, in carrying out these resolutions, the Association shall not be subjected to any expense.

The Section on Psychology reported their minutes, which were read, and referred to the Committee of Publication.

Dr. JAS. F. HIBBERD, of Indiana, offered the following amendment to the plan of organization, which was laid over, as usual:—

Add to Art. VII. the following: "Provided, however, that when an amendment is properly under consideration, and an amendment is offered thereto, germain to the subject, it shall be in order, and, if adopted, shall have the same standing and force as if proposed at the preceding meeting of the Association."

Dr. W. MAYBURRY, of Pennsylvania, called up the amendment offered last year, as follows (vol. xviii. p. 35):—

Amend Art. II. by adding to the fourth paragraph—"Provided, however, that no one shall be received as a delegate from either of these institutions who is not a member in good standing of a county or district society, in sections of the country where such exist."

After remarks by Dr. B. H. RAND, of Pennsylvania, opposing the amendment, on motion of Dr. POST, of New York, the amendment was laid on the table.

Dr. R. R. MCILVAINE, of Ohio, called attention to a preparation to restore the normal color of dead animal tissue, the discovery of M. BRUNETTI, of Padua, Italy, and exhibited a specimen thus prepared. In reply to an inquiry, Dr. MCILVAINE stated that M. BRUNETTI had announced his intention to make the whole process public.

Agreeably to the requirements of the resolutions adopted, the President announced that he had appointed the following committees:—

On Commissioners to Aid in Trials involving Scientific Testimony.—Drs. JOHN ORDRONAUX, of New York; A. B. PALMER, of Michigan; and STEPHEN SMITH, of New York.

On Annual Medical Register.—Drs. JOHN H. PACKARD, of Pennsylvania; WM. B. BIBBINS and ELLSWORTH ELLIOT, of New York.

On Devising a Plan for the Relief of Widows and Orphans of Medical Men.—Drs. J. H. GRISCOM, of New York; N. S. DAVIS, of Illinois; and A. C. POST, of New York.

On Veterinary Colleges.—Drs. THOMAS ANTISELL, of the District of Columbia; C. A. LEE and JOHN C. DALTON, of New York.

Dr. E. L. HOWARD, of Maryland, offered the following:—

Resolved, That a committee of three be appointed to report at the next annual meeting on the subject of specialties in medicine, and on the propriety of specialists advertising.

After much debate, the previous question was called by Dr. BIBBINS, of New York, and sustained, and the resolution was adopted by a large majority.

The President appointed as the Committee, Drs. E. LLOYD HOWARD, FRANK DONALDSON, and CHRISTOPHER JOHNSON, of Maryland.

Dr. C. C. COX, Chairman, read an abstract of the report of the Committee on American Medical Necrology.

On motion of Dr. CONDIE, of Pennsylvania, the report was referred to the Committee of Publication, with permission for the Committee to make additions, if necessary, to their report.

A communication from the Young Men's Christian Association, signed by their President, General O. O. HOWARD, was presented, inviting the members to visit, at their pleasure, the library and reading-rooms of said association.

The invitation was accepted with thanks.

Vice-President Dr. J. L. ATLEE, of Pennsylvania, introduced Dr. WM. O. BALDWIN, of Alabama, the President elect. The President, Dr. S. D. GROSS, said: "I welcome you as the representative of our long lost brethren. May God bless you. God bless your people. God bless all of us." Dr. BALDWIN replied in the following remarks:—

"*Mr. President and Gentlemen of the American Medical Association:*

"In returning you my sincere thanks for the honor you have conferred upon me in electing me to preside over the deliberations of this body—an association which embraces in its membership so many names justly distinguished over the civilized world for genius

and learning—believe me, gentlemen, it is with feelings of embarrassment equalled only by my profound sense of gratitude and my admiration for the magnanimity which prompted the offering. It is the more grateful to me that it was the free, unasked-for gift of the Association. I did not seek the position. High as the honor is, I should deem it purchased at too dear a price if, in order to obtain it, it had been necessary for me to solicit the votes of any men from any section, even those from my own society.

"I am painfully conscious, gentlemen, of my own unworthiness of this high distinction, and am not vain enough to appropriate the honor all to myself. I do not accept it as an individual compliment, but rather as the faithful hand of brotherhood stretched out with a generous friendship and true nobility of soul in its desire to heal and obliterate the wounds in its own bosom, for whose creation it was in no way responsible.

"Pardon me for taking this opportunity for alluding briefly to a subject which has not, perhaps, heretofore been considered germain to occasions like the present, and which I now approach with both pain and hesitation. I am sure that most of you have not failed to observe the very meagre representation which this Association has had from the Southern States since the close of the late war. This has probably been due to several causes, to only one of which, however, I desire to allude. I will not disguise from you, gentlemen, the fact that there are many physicians in the South disposed to hold themselves aloof from your councils.

"The resolution passed at your meeting in 1866, offering again the hand of fellowship to your Southern brethren, owing to the peculiar condition of our country at that time, and the fact that but little of the medical literature and news of the North circulated with us, met the eyes but of few, and there are still among us those who feel that your hearts are yet steeled against them, and who believe that, notwithstanding some formal declarations to the contrary, most of you, in your private feelings, have not yet been able to rise sufficiently above the prejudices of the past to enable you to receive them in such a manner as to make their presence here either agreeable to them or profitable to the Association.

"Looking to this conviction of theirs, strengthened by the fact that they are still under the cloud of the nation's displeasure, and denied the political rights to which they esteem themselves entitled, they have felt that it would be both undignified and unmanly to present themselves at your doors for admittance to your councils,

or to offer to affiliate with you, until they can come as your peers in all things—in political and social rights, as well as in scientific zeal and devotion.

"So far as my observation has extended, I am sorry to know these sentiments have prevailed with many, and it is but frankness in me to say so. I am free to confess that I, with many others, have not sympathized altogether with these feelings. I saw the resolution adopted in 1866, and before referred to, inviting us, in most respectful and conciliatory language, to resume our places in this Association. I felt this was all you could do, all you ought to do, all we could ask, and was satisfied with it, and only regret it did not obtain a more general circulation. The society to which I belong, with entire unanimity, appointed its full quota of delegates to this meeting. I came here to lend my humble example to the work of re-establishing our former relations. I never doubted I would be received with courtesy, and even with kindness.

"The broad, liberal, and catholic sentiments proclaimed from this stand in the annual address of that noble old Roman, our distinguished President, Dr. GROSS, knowing in these halls 'no North, no South, no East, no West'—he whose clustering honors, though won in your midst, yet gather a beauty and brilliancy from the love and veneration in which he is held in the South—must be received as a declaration of sentiments and principles by this Association, and cannot fail to correct the errors and misrepresentations which have prevailed in our section. This action of yours to-day, in awarding through me, as one of her humble representatives, the honorable and distinguished office of President of this Association, a position which might well be claimed for one of the many of your own renowned and gifted sons, will, I am sure, testify to our brethren of the South, in silent but forcible language, the injustice which has been done you by those who have taken a different view of your real sentiments and feelings towards us.

"In saying this much, I do not intend it as a reproach to those of my section who have hitherto so misunderstood you; and you, in your generosity, I am sure, are prepared to concede much to the pride of a noble manhood, who, standing amidst the memories of blasted hopes and ruined fortunes, have perhaps been disposed to guard with too jealous and sensitive an eye that which is dearer to them than fortune or life itself, and which I am sure you would be the last to willingly see compromised—their personal and professional dignity and honor.

"For myself, and for those whom I represent, I grasp with unaffected pleasure the hand which you have so gracefully and magnanimously offered, and I hope and believe this sentiment will meet a ready response from all our brethren of the South. *Let us again be united as friends and brothers.* Ignoring past and present political differences, let us exhibit to this distracted country an example of forgiveness and toleration worthy the emulation of a great and noble people. Let the bonds which we acknowledge here bind us in all portions of this broad land as a sacred brotherhood, engaged in a common toil, with one mind, one heart, and one purpose. Let the place annually selected for our meetings be our Mecca. There let us meet with harmony of sentiment for thorough organization, for connected and concerted action, without which no great science or art can ever attain its highest perfection. Exacting from each other only the qualifications necessary for honorable membership, let us there mingle in the sacred precincts of our humane profession, and join hands and sympathies in the strengthening influences of association and fellowship; and as we lay fresh offerings in the temple of a noble science, and build new fires on her altars, let us cherish in our hearts the ennobling sentiment of brotherly love.

"In conclusion, I would say we have doubtless, most of us—ay, certainly most of us in that land of many sorrows from whence I came—tasted the bitter fruits of the bloody and unholy war through which we have passed, and wept over its dire calamities. *We,* as an association, had no agency in its creation. It belongs now, with all its disasters and miseries, to the dead past, and as *we* had no cause for quarrel then, we have none now for separation or estrangement. We may not forget our sorrows for the past, and we will still water with our most sacred tears the graves of our noble sons who fell victims to the strife. But whenever there is a grief at the heart, a tear for the ashes of the past, let us wipe from it all traces of bitterness, and drape its memories and sanctify its sadness with the manly and Christian virtues of CHARITY, FORGIVENESS, and FRATERNAL LOVE."

The President, Dr. GROSS, said he desired to avail himself of this opportunity to correct an erroneous statement which had gained publicity throughout the Southern States, in regard to a resolution alleged to have been passed by this Association, recommending that the government should make surgical instruments and medicines contraband of war. He said, "I take this occasion to deny

that the American Medical Association ever passed any such resolution, and hope our President elect will do everything in his power to promulgate this fact among our Southern brethren."

Dr. DAVIS desired to say, in addition, that not only had no such resolution ever been adopted, but that it had never been introduced.

On motion of Dr. MCKEW, of Maryland, the statements just given were ordered to be entered on the minutes.

Dr. DAVIS, Chairman of the Committee on Medical Rank in the Navy, reported that they had waited upon the proper Congressional committee, and had received assurances that the matter would be favorably considered, and asked that the Committee be discharged. It was, however, resolved that the present Committee be continued for another year.

Dr. DAVIS having called for a report from the Committee to obtain Rooms for the Archives in the Smithsonian Institution, after explanations by Dr. G. TYLER, of the District of Columbia, Chairman, and the Permanent Secretary, the Committee were, on motion, continued.

Dr. BIBBINS, of New York, offered the following, which was adopted:—

Resolved, That there be added to the Committee of Arrangements a Sub-Committee of Arrangements in each of our large cities, consisting of three members, whose duty it shall be to obtain, if practicable, a reduction of fare upon the routes of travel for the delegates from their city and vicinity who attend the meeting of the Association.

On motion, the Permanent Secretary was empowered to make the appointments on said committees.

Dr. DAVIS, of Illinois, offered the following, which was adopted:—

Resolved, That the Chair shall appoint a committee of three, to report at the next session, on the practicability of establishing a library of American medical works, including books, monographs, and periodicals.

Committee: Drs. J. M. TONER, of District of Columbia, N. S. DAVIS, of Illinois, and D. F. CONDIE, of Pennsylvania.

On motion, adjourned until Friday, at 9 A.M.

FOURTH DAY.

FRIDAY, MAY 8.

The Association met at 9 A. M.

The President, Dr. GROSS, in the chair.

The Permanent Secretary read the minutes of the preceding day, which were approved.

Dr. TYLER, of the Committee of Arrangements, read an invitation from Mr. SYKES for the Association to visit Mount Vernon at 11½ o'clock on his steamer, which was accepted. Also an invitation from Mr. KING, requesting that he be allowed to make a photograph of the Association, which was accepted, and at 10 o'clock the picture was taken, the members being arranged in front of the hall.

The President introduced Prof. HENRY, of the Smithsonian Institution, who was invited to take a seat upon the platform.

Dr. HENRY A. MARTIN, of Massachusetts, offered the following, which was adopted:—

It seems proper that this Association should not be without a committee on a subject so transcendently important as that of vaccination, therefore,

Resolved, That a standing committee of one be appointed upon the whole subject, to report from time to time on such topics connected with vaccination as shall, in the estimation of said committee, appear of chief practical interest and importance to the profession.

Committee: Dr. HENRY A. MARTIN, of Massachusetts.

The Committee on Nominations presented the balance of their report, which was adopted:—

ASSISTANT SECRETARY.

Dr. A. J. SEMMES, *of Louisiana.*

Committee of Arrangements.—Drs. T. G. RICHARDSON, S. M. BEMISS, C. BEARD, L. T. PIMM, D. WARREN BRICKELL, S. CHOPIN, and W. S. MITCHELL, all of New Orleans.

Committee on Medical Education.—Drs. J. C. REEVE, of Ohio; J. S. HILDRETH, of Illinois; W. C. MCCOOK, of Pennsylvania; FRANK RICE, of Tennessee; and S. H. PENNINGTON, of New Jersey.

Committee on American Medical Necrology.—Drs. C. C. COX, of Maryland; E. B. STEVENS, of Ohio; W. F. PECK, of Iowa; H. VAN DUSEN, of Wisconsin; J. M. TONER, of the District of Columbia;

JOS. SIMPSON, of the U. S. Army; J. C. WESTON, of Maine; H. BRONSON, of Connecticut; HENRY NOBLE, of Illinois; CHARLES EVERSFIELD, of the U. S. Navy; T. PARVIN, of Indiana; J. C. HUPP, of West Virginia; J. MAURAN, of Rhode Island; D. CLARK and J. M. KELLER, of Tennessee; H. F. ASKEW, of Delaware; H. G. CLARK, of Massachusetts; E. M. MOORE and JOHN SHRADY, of New York; CHAS. A. LOGAN, of Kansas; — STEWART, of Minnesota; H. MILLER, of Kentucky; S. G. ARMOR, of Michigan; JNO. BLANE, of New Jersey; A. FLEMING and EDWARD WALLACE, of Pennsylvania; R. D. ARNOLD, of Georgia; J. S. WEATHERLY, of Alabama; S. M. WELCH, of Texas; THOS. M. LOGAN, of California; J. W. H. BAKER, of Iowa; P. A. STACKPOLE, of New Hampshire; L. S. JOYNES, of Virginia; D. W. BRICKELL, of Louisiana; and DAVID BOOTH, of Mississippi.

Committee on Medical Literature.—Drs. E. WARREN, of Maryland; JOS. JONES, of Tennessee; E. ANDREWS, of Illinois; J. J. WOODWARD, of the U. S. Army; and P. S. WALES, of the U. S. Navy.

Committee on Climatology and Epidemics.—Drs. J. C. WESTON, of Maine; P. A. STACKPOLE, of New Hampshire; HENRY JANES, of Vermont; HENRY I. BOWDITCH, of Massachusetts; C. W. PARSONS, of Rhode Island; E. K. HUNT, of Connecticut; W. F. THOMS, of New York; EZRA M. HUNT, of New Jersey; D. F. CONDIE, of Pennsylvania; O. S. MAHON, of Maryland; JURIAH HARRISS, of Georgia; GEO. ENGELMAN, of Missouri; R. F. MICHEL, of Alabama; T. J. HEARD, of Texas; R. C. HAMIL, of Illinois; J. F. HIBBERD, of Indiana; T. ANTISELL, of the District of Columbia; J. C. HUGHES, of Iowa; ABM. SAGER, of Michigan; T. L. NEAL, of Ohio; F. W. HATCH, of California; B. W. AVENT, of Tennessee; E. A. HILDRETH, of West Virginia; SAMUEL WILLEY, of Minnesota; W. O. OWEN, of Virginia; L. B. BUSH, of Delaware; G. W. LAWRENCE, of Arkansas; —— COMPTON, of Mississippi; and L. T. PIMM, of Louisiana.

Special Committee on Alcohol and its Relations to Medicine.—Drs. JOHN BELL, of Pennsylvania; J. R. W. DUNBAR and RICHARD MCSHERRY, of Maryland.

Special Committee on the Cryptogamic Origin of Disease, with special reference to recent microscopic investigations on that subject.—Dr. EDW. CURTIS, of the U. S. Army.

Special Committee on Diseases of the Cornea.—Dr. J. S. HILDRETH, of Illinois.

Special Committee on Excision of Joints for Injuries.—Dr. J. B. REED, of Georgia.

Committee on Prize Essays.—Drs. S. M. BEMISS, J. SCOTT, D. W. BRICKELL, S. A. SMITH, and C. BEARD, all of New Orleans.

Resolved, That those gentlemen who desire to report on special subjects, and will pledge themselves to report at the next meeting, be requested to send their names, and the subjects on which they desire to report, to the Permanent Secretary.

The Section on Medical Jurisprudence, Hygiene, and Physiology reported that but one paper had been presented, that by Dr. JOS. JONES, of Tennessee, entitled "Albinism in the Negro Race." After a careful examination, they recommended that it be submitted to the Smithsonian Institution for publication.

On motion, the report was accepted.

The President appointed Dr. CHARLES A. LEE, of New York, to represent the Association at the meeting of superintendents of insane asylums.

On motion, Dr. HENRY F. ASKEW, of Delaware, was added to the Committee on Rank of Medical Men in the Navy.

On motion of Dr. HIBBERD, the amendment to the plan of organization offered last year by Dr. TONER (see p. 42) was unanimously adopted. "Amend Art. V. to read: The sum of five dollars shall be assessed annually upon each delegate to the sessions of the Association, as well as upon each of its permanent members, whether attending or not, for the purpose of raising a fund to defray the necessary expenses of the Association, and for printing the *Transactions.* The payment of this sum shall be required of the delegates and members in attendance upon the sessions of the Association previously to their taking seats and participating in the business of the sessions. Permanent members, not attending, shall forward their yearly dues to the Treasurer, and thereby shall be entitled to receive a copy of the printed *Transactions,* the same as delegates."

On motion of Dr. DAVIS, it was

Resolved, That hereafter the necessary expenses for rent of hall for general meetings and rooms for sections to accommodate the annual meetings, and the necessary expenses for cards of membership, be paid out of the treasury of the Association.

On motion, it was

Resolved, That a committee be appointed on the Use of Prophylactics in Zymotic Diseases.

Committee: Dr. NELSON L. NORTH, of New York.

On motion, it was

Resolved, That a committee be appointed on the subject of Inebriate Asylums, and that Dr. C. H. NICHOLS, of the District of Columbia, be the chairman.

On motion, Drs. F. HOWARD, of the District of Columbia, and J. R. W. DUNBAR, of Maryland, were added to said committee.

On motion of Dr. C. C. LEE, of New York, it was

Resolved, That a committee be appointed on the Relations of the Influence of Quarantine Regulations in the Ports of the United States, in regard to Transportable Infections.

Committee: Dr. ELISHA HARRIS, of New York.

On motion of Dr. LEE, of New York, it was

Resolved, That a committee be appointed on the Utilization of Sewerage.

Committee: Dr. STEPHEN SMITH, of New York.

On motion, Dr. T. ANTISELL, of the District of Columbia, was appointed a committee to report on the Influence of the Pneumogastric Nerve on Spasmodic and Rhythmical Movements of the Lungs.

Dr. J. SHRADY, of New York, read the minutes of the Section on Surgery and Anatomy, which were, on motion, accepted, and referred to the Committee of Publication.

Dr. DAVIS, of Illinois, read the minutes of the Section on Meteorology, Medical Topography, and Epidemic Diseases, which were accepted, and similarly referred.

The Permanent Secretary read the minutes of the Section on Practice of Medicine and Obstetrics, and those of the Section on Chemistry and Materia Medica, which were accepted, and also referred for publication.

On motion, Dr. EDWARD R. SQUIBB, of New York, was added to the Committee named by the last Section on the cinchona-tree.

On motion of Dr. WASHINGTON L. ATLEE, of Pennsylvania, it was

Resolved, That the thanks of this Association are tendered to the President of the United States, to the Hon. SCHUYLER COLFAX, Speaker of the House of Representatives, the Hon. EDWIN D. MORGAN, Chief-Justice CHASE, and the Hon. RICHARD WALLACH Mayor of Washington, for their politeness and hospitality to the members of this Association during their sojourn in Washington.

Resolved, That we shall remember with particular pleasure our

visit to the Army Medical Museum, and the ingenious illustrations of Dr. J. J. WOODWARD, under the direction of Surgeon-General J. K. BARNES, and we acknowledge the benefits to science and to our profession likely to result from the energy, intelligence, and taste of General BARNES.

Resolved, That our thanks are due to Mr. ALEXANDER GARDINER for his obliging assiduity in exhibiting his admirable method of lighting the capitol.

Resolved, That the courteous attentions of the Committee of Arrangements have made our session in this city a visit both of profit and of pleasure.

On motion of Dr. D. W. BLISS, of the District of Columbia, it was

Resolved, That a committee of three be appointed to examine into the present plan of organization and management of the United States marine hospitals, and report at the next annual meeting of this Association.

Committee: Dr. D. W. BLISS, of the District of Columbia, Chairman.

The President, by suggestion of Dr. H. I. BOWDITCH, of Massachusetts, presented the following extract of a letter from Dr. THOS. DWIGHT, Jr., to Dr. H. I. BOWDITCH, of Boston, dated Berlin, April 15, 1868:—

"A little while ago I was at Mr. BANCROFT'S, and he said that next autumn—October, I think—Prof. EHRENBERG, who is now old and blind, celebrates the fiftieth anniversary of the day on which he obtained his degree. Mr. BANCROFT said that he had written to Dr. HOLMES, to ask him to write a poem for the occasion, and begged me to write to you concerning a testimonial of some kind to be got up in America and presented at the same time. I have written this at his request, and I beg you to consider me as merely his secretary in the matter."

On motion, the President, Dr. GROSS, was authorized to send letter on behalf of the American Medical Association, expressive of their high regard for the veteran microscopist and naturalist.

The President appointed as delegates to foreign medical societies, Drs. SAMUEL J. JONES, of Illinois; GEO. C. BLACKMAN, of Ohio; B. FORDYCE BAKER, of New York; and, on motion, the President was added to the list of delegates.

Dr. GEO. G. CRAWFORD, of Georgia, presented the following:—

"*Charges against the Atlanta Medical College, Atlanta, Ga.*—1st. That the charter of said college is irregular. 2d. That graduating

two classes in the same year is irregular. 3d. That conducting the exercises of the college without the consent or co-operation of the trustees of the college is irregular."

After some debate, the matter was referred to the Committee on Medical Ethics.

Dr. J. S. WEATHERLY, of Alabama, addressed the Association, on behalf of the Southern delegates then present, extending a warm invitation for the members to be present in large numbers at the session to be held in 1869 in New Orleans, and thus to give them an opportunity of returning in some measure the great kindness and generosity that had been shown them. He assured the members that he had no hesitation in speaking for the profession of New Orleans, and would assure them that they would be received with open arms, and as warm a welcome as at any part of the Union.

On motion, the thanks of the Association were tendered to the Philadelphia, Wilmington, and Baltimore, the Baltimore and Ohio, the Orange and Alexandria, and other railroads that had extended facilities to the delegates.

Dr. GROSS then arose and spoke as follows:—

"Before the question of final adjournment be put, allow me to tender you my cordial acknowledgments for the kindness and courtesy which you have extended to me as your presiding officer. Gratitude and good taste alike prompt the expression of my feelings. In everything I felt that I had your generous support and sympathy; whatever errors may have been committed, were errors of the head and not of the heart, and are, I am sure, already forgotten by you. I congratulate you upon the manner in which you have conducted your proceedings. It is questionable whether there ever was a deliberative body of such magnitude in which there was so little discord, or so little said and done of an objectionable character; harmony, cordial and complete, prevailed from the beginning to the end. There was, indeed, not one word uttered that any one, even the most fastidious, might wish to recall; a circumstance the more surprising when it is recollected that men in the heat of debate often give way to heedless and unguarded expressions calculated to ruffle the feelings and engender unpleasant reminiscences. We have accomplished not a little work, and, above all, we have had an opportunity of reviving friendly feeling, of extending our acquaintance with each other, and of interchanging sentiments with regard to matters of vital importance to our

beloved profession. I am sure that every one will say, as he leaves this hall, that it was good for him to have been here, and that he will return to his home with new resolves, determined to devote himself more earnestly than ever to the advancement of the glory of his noble calling; that he will strive more than ever to elucidate its great principles; and that, abandoning all other pursuits, he will worship medicine as the only goddess of his idolatry. Hoping that no evil may befall you on your homeward journey, and that your families may meet you with messages of peace and glad tidings, I bid you a cordial and affectionate farewell."

On motion, the thanks of the Association were presented to the retiring President for the ability and courtesy with which he had fulfilled the duties of his office.

On motion, the Association adjourned, to meet in New Orleans, the first Tuesday in May, 1869, at 11 A.M.

WM. B. ATKINSON,
Permanent Secretary.

J. W. H. LOVEJOY,
Assistant Secretary.

REPORT

OF

THE COMMITTEE OF PUBLICATION

AND OF

THE TREASURER.

REPORT OF THE COMMITTEE OF PUBLICATION.

THE Committee of Publication respectfully report that an edition of five hundred and fifty copies was issued by them, of which four hundred and forty-five were delivered to subscribers and various medical journals.

They desire to call the attention of the Association to the fact, that the carrying out of the suggestion made at the last meeting—that the supervision of the various reports and papers be left entirely in the hands of the Committee—enabled them to issue the volume at an earlier date than was ever before attained to. By this means, the early publication of the volume of *Transactions* can always be assured. While a rigid adherence to this rule will be advantageous to the Association at large, it will undoubtedly stimulate contributors to place their reports and papers in the hands of the Committee in a condition as closely approximating correctness and completeness as may be practicable.

The Committee congratulate the Association on the fact that their indebtedness for the publication of the previous volume has been cancelled by the efforts of several members, who have exerted themselves to obtain funds by subscription, and the sale of *Transactions.*

The accompanying statement exhibits the number of copies of each volume now held by the Association.

All of which is respectfully submitted.

FRANCIS G. SMITH, JR., *Chairman.*

Statement of volumes delivered April 20, 1867, *to April* 20, 1868.

	On hand April 20, '67.	Since received.	Total.	Since delivered.	Remaining on hand April 20, '68.
Volume I.	4	4	8	1	7
" II.	5	3	8	1	7
" III.	4.	2	6	1	5
" IV.	4	1	5	1	4
" V.	206		206	8	198
" VI.	4		4		4
" VII.	16	1	17	7	10
" VIII.	169		169	7	162
" IX.	201		201	9	192
" X.	111		111	7	104
" XI.	127		127	6	121
" XII.	206		206	7	199
" XIII.	86		86	6	80
" XIV.	146		146	4	142
" XV.	142		142	5	137
" XVI.	313		313	10	303
" XVII.	133		133	34	99
" XVIII.		550	550	445[1]	105
"Proceedings."	24		24	6	18

[1] Of these, 20 were delivered to medical journals.

REPORT OF THE TREASURER.

THE Treasurer has the honor to report that the American Medical Association is again solvent. This desirable result has not been achieved without labor, and Drs. Bulkley, Catlin, and Gallaher deserve the thanks of the Association for the part they have taken in procuring subscriptions, and thus contributing to this end.

A great abuse has grown up in the Association, and has largely assisted in the impoverishment of the treasury. The Association is permitted to give an annual prize of one hundred dollars for an essay of great worth, if such an one should be presented, and even to vote one hundred dollars to a second, if several should be presented of great value. Under this permission it has become a custom to vote away two hundred dollars annually to the two best essays presented, whatever be their intrinsic merit; thus not only voting away two hundred dollars, but entailing a heavy expense for printing and illustrating essays that may deserve no such distinction. Will the Association give special heed to this fact?

The American Medical Association

DR.

May 1, 1867.		
To cash received from Cincinnati	$1918	08
" subscribed for payment of debt	250	00
" for copies of *Transactions* sold, of various years	689	00
	$2857	08
May 1, 1868.		
To balance on hand	$83	92

CASPAR WISTER, *Treasurer.*

in account with Caspar Wister, Treasurer.

		Cr.
May 1, 1868.		
By cash to	Express for postage on draft	$2 25
"	Dr. M. A. Pallen, for prize essay	100 00
"	Dr. W. B. Atkinson, travelling expenses	74 00
"	T. K. Collins, in full of his account for printing the *Transactions* for 1866	196 54
"	Dr. J. R. Black, for prize essay	100 00
"	T. K. Collins, for printing, binding, and illustrations of 550 copies of *Transactions*, Vol. XVIII.	2196 61
"	Henry Barnes for services as clerk	50 00
"	Cushing & Bailey on account of Dr. C. C. Cox, Chairman of Com. on Necrology	2 50
"	Henry C. Lea for boxes, paper, and twine, used in distribution of volume	46 00
"	Secretary for postage	5 26
"	balance on hand	83 92
		$2857 08

Audited and found correct.

F. G. SMITH, *Chairman.*
H. F. ASKEW,
WM. MAYBURRY,
WM. B. ATKINSON.

ADDRESS

OF

SAMUEL D. GROSS, M.D., LL.D.,

PRESIDENT OF THE ASSOCIATION.

ADDRESS OF SAMUEL D. GROSS, M.D., LL.D.,

PRESIDENT OF THE ASSOCIATION.

In taking the chair which, one year ago, your impartiality assigned to me, I should be false to every emotion of my heart if I failed to express my profound gratitude for the distinguished honor which was thus, unsolicited and totally unexpected, conferred upon me. I cordially thank you for this mark of your respect and confidence. To be the presiding officer of an association which includes among its members many of the oldest and most illustrious physicians of the country, as well as many of the younger, more active, and promising, cannot be esteemed a light honor. The gratification of my election was the more keenly appreciated by me because it occurred in a city in which repose the ashes of some of my earliest and most cherished friends, and in which, under Providence, I laid the foundation of what little reputation I may possess.

It will be my endeavor, by an impartial discharge of the duties of this high office, to merit the confidence you have reposed in me, and to do all I can to expedite the transaction of the business that may be brought before us. You will, I doubt not, conduct your deliberations with that calmness and dignity, that amenity and courtesy, that spirit of forbearance, so characteristic of men who bear towards each other the noble title of professional brethren, linked together by the most sacred ties, a divine origin, the cultivation of medical science, and the deepest interests of our common nature. I shall have attained my highest ambition, if, on retiring from this chair, it shall be said of me that I worthily wore the mantle of the many distinguished men who preceded me in office.

In addressing you in my official capacity, I shall consider you as a national congress, representing the interests and wishes of the great American republic of medicine, and myself as a chief magis-

trate, called to preside over your deliberations, and empowered to offer such suggestions as shall tend, if wise in themselves, and judiciously carried out, to advance the honor and glory of the profession, the good of our race, and the dignity and importance of this Association.

One of the great objects of the Association, as set forth in the preamble of its Constitution, is to facilitate and foster friendly intercourse among its members. It is hardly probable, however, that its founders intended to restrict the cultivation of this friendly feeling to its own body. It was, doubtless, designed to be catholic in its application. Its doors are open to all, provided they are of the orthodox faith, and in honorable standing in the profession. As was eloquently remarked at the meeting at Cincinnati, a year ago, by a distinguished associate, now one of our vice-presidents, "In the great republic of science all geographical lines should be obliterated." American physicians have a common heritage, and a common interest in each other's welfare and reputation. Medicine is cosmopolitan in its aims and objects; it recognizes no nationalities; it knows no East or West, no North or South. It extends its friendly hand to every honest, true-hearted son of Æsculapius. It seeks one common brotherhood; one common altar where we may annually meet for the interchange of kindly feeling and for the renewal of our vows of fidelity and devotion to our great and venerated profession. I cannot suppose that there is in this house one soul so selfish, so narrow-minded, so sectional in its feelings and its purposes, that it would not, if called upon, pray with all the fervor of a Christian saint that this Association might be cemented with an adamantine chain reaching from one extreme of this vast continent to the other, and binding us all in one common whole, indivisible, now and forever, for the honor and glory, not only of the medical profession, but of America, of that America which the world hails as the land of Columbus and of Washington, the land of great men and noble women, the asylum of the oppressed and the friendless, the home of the arts and sciences, and of all that can adorn and beautify and ennoble human nature. "Stars," as a distinguished writer has felicitously expressed it, "need no birthright, no nationality; they belong to all lands and to all nations."

It has been alleged, as a kind of reproach to the Association, that it does not exercise sufficient vigilance in regard to the admission of its members. I am sure that it is only necessary to allude to this subject in order to secure it proper attention. While

I should myself be in favor of the most liberal interpretation of this part of the Constitution, I should be opposed to the reception of any delegates whose claims are not based upon the most reliable and trustworthy vouchers. There is no doubt that the dignity of the Association would be greatly promoted by the exercise of greater stringency. I do not know that it has actually suffered from the alleged laxity, but there is no question that it has afforded occasion for much criticism and ill-natured remark, and that it has prevented some of the older and more influential members from taking that active interest in its prosperity and permanency which they would otherwise have done.

Much complaint has been made, from time to time, respecting the character of our Transactions, on account of their bulk, the nature of their contents, and the expense of their publication. It seems to me that the Committee of Publication should be invested with plenary powers in regard to all papers not read before the Association or in the sections; for, unless this be done, how are we to judge of their fitness for insertion? Many of the articles that have appeared in the Transactions are far better adapted to the pages of a medical journal than a publication designed to serve as the exponent of the views and opinions of so learned and dignified a body as this is, or ought to be. Above all, care should be taken that no prize essays be admitted if they are not founded upon elaborate experiments, original observation, or accurate clinical experience. Such a procedure, while it would greatly reduce the bulk of the volumes, and proportionately diminish the expense of publication, would impart a more literary and scientific tone to our labors, meet the approbation of enlightened physicians, and tend to exalt the character of the Association as a great national institution.

The subject of medical education continues to be one of deep and absorbing interest with this Association. Although it was one of the principal objects for which the Association was established, it was never brought under its notice in so clear and tangible a form as at our last meeting, in consequence of the action of the Teachers' Convention, which digested a plan of college requirement and instruction which, it was gratifying to see, met with the unanimous approval of this body, and which only awaits, as far as its practical application is concerned, the sanction of the principal schools of the country for its general adoption. It will be a happy day both for medical science and humanity when this important point shall be attained. No men are more conscious of the present imperfect

system of education than the teachers themselves, and none more anxious for the introduction and general adoption of the contemplated reform. The suggestions offered by the Teachers' Convention, and which are now the property of the Association, are, perhaps, as unexceptionable as it is possible to render them in the existing state of the science. The plan should receive the cordial support of every enlightened physician in the country. It is a subject of the deepest humiliation that, except in a few honorable instances, no material changes have taken place in the curriculum of instruction in our schools within the last half century. For this neglect the schools are not alone responsible. The profession at large must come in for not a little share of the blame. Without its aid and co-operation the colleges are powerless. Reform, to be worth anything, must begin at home, in the office of the private preceptor, who should unhesitatingly reject every applicant that has not a sound preliminary education, competent talents, and the habits of a thorough student. If such a course were adopted, the ranks of the profession would soon be elevated far above their present standard, medical science and humanity would be vastly the gainers, and much less would be heard than is now the case of irregular outside practice—of homœopathy, hydropathy, eclecticism, and other so-called systems—outgrowths, for the most part, of the want of proper education, science, and philosophy in our own profession. The cause of our own woe lies at our own doors, in the imperfect appreciation and discharge of our duties.

The schools are afraid to elevate the standard of requirements without the general co-operation of the colleges, lest they should suffer in the number of their pupils and the amount of their emoluments. Nor is it worth while for a few members of a faculty to raise their voices in favor of reform when all the rest are opposed to it. It is confessedly difficult, if not impossible, for seven or eight men to see any one subject in the same light. "Quot homines, tot sententiæ" is as true of medical faculties as of any other associations; and it is therefore simply absurd for the profession to hurl its wrath at this or that institution because it will not step out of its way to sacrifice itself to reform, of the importance of which it may be perfectly sensible. Practitioner and professor, private preceptor and college teacher, are, in the existing state of this grave and important question, equally at fault and equally censurable. Every one may justly exclaim, in the language of the devout publican, "God have mercy upon me, a sinner."

I am not aware that the education of nurses has received any attention from this body; a circumstance the more surprising when we consider the great importance of the subject. It seems to me to be just as necessary to have well-trained, well-instructed nurses as to have intelligent and skilful physicians. I have long been of the opinion that there ought to be, in all the principal towns and cities of the Union, institutions for the education of men and women whose duty it is to take care of the sick, and to carry out the injunctions of the medical attendant. There is hardly one nurse, of either sex, in twenty who has a perfect appreciation of the requirements of the sick-room, or who is capable of affording the aid and comfort so necessary to a patient when oppressed by disease or injury. It does not matter what may be the skill of the medical practitioner, how assiduous or faithful he may be in the discharge of his functions, as a guardian of health and life, his efforts can be of comparatively little avail unless they are seconded by an intelligent and devoted nurse. We need in this country a million of Florence Nightingales, and at least half that number of John Howards, to aid our physicians in their strife with disease and death. Myriads of human beings perish annually, in the so-called civilized world, for the want of good nursing.

Medical men, in the exercise of their functions, are often called upon to act as witnesses in cases involving property, reputation, and even life itself. The real object, as contemplated by the law, of every trial in which scientific testimony is required is to ascertain "the truth, the whole truth, and nothing but the truth," both as it respects the interests of the State and of the accused. The procedure, as generally conducted, partakes much more of the character of a combat, in which the opposing parties are pitted against each other, often with a degree of fierceness and acrimony that only shows too clearly the partisan feelings of the belligerents, instead of the dignified inquiry into the real merits of the case. The result is that, instead of enlightening the court and jury by their testimony, the medical witnesses only embarrass their minds, and this especially defeats the ends of justice. There is not a physician of any experience who has not been shocked at the manner in which public trials are conducted, and who has not felt how inadequately the ministers of the law discharge their duties in cases involving the deepest interests, not only of individuals but of society at large. Many of these trials are the merest farces, calculated to excite the risible faculties of the bystanders, if it were not for the serious con-

sequences to which they lead. My experience is that there are few lawyers, however intelligent, or skilled in the examination of witnesses, who are fully competent to elicit even the more prominent facts of a case. Often, indeed, from an anxious desire to do all they can for the defence of their clients, they do not hesitate to browbeat and bully the medical witness, especially if he is young and timid, in order to distort his testimony, and to confuse the minds of the judge and jury. Sometimes, again, even when influenced by the best and most laudable intentions, the lawyer, from sheer ignorance, propounds his interrogations in so awkward and unscientific a manner as effectually to defeat the very end he has in view.

There are, as is well known, two kinds of medical witnesses, those who, like ordinary witnesses, testify as to what they have seen, and those who have no personal knowledge whatever of the case. The latter are known as experts, and there are few trials, of any moment, in which they do not play a more or less conspicuous part. Generally speaking, experts are physicians of reputation and experience, or men who have acquired distinction in some particular branch of the profession, and who are, consequently, supposed to possess a peculiar fitness for expressing an opinion upon the questions at issue.

When testimony fails to enlighten the judge and jury it signally fails of its objects, and is therefore calculated to bring discredit upon all concerned; nay, more, its effect may be to cause the innocent to be punished, and the guilty to escape.

In order to meet these contingencies, as disgraceful as they are inconsistent with the designs and operations of civilization, there should be in every judicial district a commissioner whose duty it should be to aid in the examination of witnesses in every trial involving scientific testimony. Such an officer, if chosen merely with reference to qualification, might confer inestimable benefit upon the community, since, laying aside all partisan feeling and personal bias, his sole business would be to elicit the truth, the whole truth, and nothing but the truth on both sides of the case, and there place the matter, fully, fairly, and tangibly, before the court and jury. It should be made a part of his duty to prevent the bar from embarrassing the medical witness—a practice at the present day disgracefully common among lawyers—and to assist them in explaining themselves fully upon every interrogatory that may be propounded; to prompt the advocates in regard to any

questions of omission, tending to supply additional information; in a word, to act as a medium between the opposing counsel, and as a light to the judge and jury, in clearing up points of an obscure or doubtful nature.

The commissioner should receive his appointment from the judges of the Supreme Court of the State; a fixed salary should be attached to the office; and he should have at least two assistants, to make all post-mortem examinations, as well as to inspect the living, in all cases of suspected or alleged crime, as abortion, infanticide, rape, and similar offences. He should have the privilege of summing up the medical testimony, not orally but in writing, for the benefit of the judge and jury, the latter of whom are always ignorant of the meaning of technical terms, and therefore incapable of drawing a proper distinction between the points of difference on the part of the scientific witness.

Time will not permit me to dwell any further upon this subject; a subject which addresses itself to the judgment and good sense of every enlightened legislator, physician, and Christian. I am fully sensible of the many difficulties which environ it; but I am satisfied that, as civilization advances, it will receive the attention which its great importance so fully merits. I will only add that what I have written here was substantially embodied in an inaugural discourse which I delivered, twenty years ago, as President of the Kentucky State Medical Society.

An able and elaborate report was presented at the meeting a year ago on the subject of the grade and pay of the medical corps of the Navy. The matter is one of deep interest to the profession generally; for whatever affects the honor and dignity of the naval surgeon affects us as a body, and is therefore worthy of our serious consideration. These complaints have been so often reiterated that it is impossible any longer to disregard them, or pass them by in silence. Congress has been appealed to again and again upon the subject, but has always failed to take any active steps towards granting the reasonable demands—perhaps it would be more proper to say absolute necessities—of the medical staff. Instead of this, as if to add insult to injury, it has omitted to raise the rank and pay of the medical staff, while it has created four additional grades to reward the line. There are, at this moment, as I am informed by the distinguished and efficient chief of the Bureau of Medicine and Surgery, fifty vacancies in the medical corps, and it is not at all likely, judging from the present state of affairs, that this num-

ber will be materially diminished so long as the existing obstacles remain in force. There can be no inducement for a young physician to connect himself with a service in which he is constantly exposed to impertinence and insolence, if not to positive indignity. Whatever may be the character of the officers of the line, there can be no doubt that, as respects their education, refinement, and social position, the medical officers are fully equal to them, not to say anything of their onerous and responsible duties, which, as a general rule, demand a high degree of science and intellect for their successful discharge. It does not admit of question that the character of the naval service of the country, at foreign as well as at domestic stations, depends essentially as much upon its medical officers as upon the officers of the line in their intercourse with the world at large. The medical officers of the navy must necessarily be regarded as types of the professional men of the nation which they represent, and the character of the latter, as gentlemen and men of science and intelligence, will therefore be judged according to the conduct of their naval brethren.

That the complaints of the medical officers of our navy may be placed in a proper light, I have been at some pains to obtain a list of the rank and pay of the medical staffs of the different governments of Europe. From this statement, kindly furnished me by a highly respectable member of the service, Dr. Philip S. Wales, it appears that in the French navy, medical officers may attain the rank of admiral; in the English, Russian, and Spanish, that of vice-admiral; and in the Austrian, that of rear-admiral. In the French service the surgeon-in-chief of a squadron is allowed table-money, and messes with the commander-in-chief. In the Austrian navy the medical men wear the same uniform, enjoy the same privileges, and receive the same retired pay as the line; in the Russian, they are allowed an increase of pay every five years, and enjoy the same honors and pensions as the other officers. In the Spanish navy the same regulations essentially exist. The highest grade in the navy of this country, on the contrary, is that of commodore, enjoyed only by the Chief of the Bureau of Medicine and Surgery; the assistant surgeon ranks with the ensign, and the passed-assistant surgeon with the lieutenant. The medical officers do not receive the rewards, honors, and pay of those grades of the line with which they are assimilated. The full pay of a captain, for instance, of any number of years' standing, is $3500 per annum; a surgeon, on the contrary, has to be in the service in that grade fifteen years to

obtain this rank, and is then entitled only to $2600. All his time as assistant and passed-assistant is lost to him. The highest pay that the oldest surgeon on the active list can receive, after having been in the service for nearly forty-two years, is $3300. The youngest captain in the navy, on the contrary, is entitled to an income of $3500, with a service only of twenty-nine years.

Another great disadvantage is that, while the captain, however young he may be, has a large, airy apartment to himself, the aged surgeon is stowed away in a small room, and is, much to his chagrin and annoyance, thrown among a crowd of noisy young men altogether his inferiors in education and social position.

These statements show how unequal is the estimation in which the most republican government in the world holds the services of its medical officers in comparison with those of the navies of the principal monarchies of Europe. There is no service abroad in which medical men may not hope, eventually, to reach the rank of admiral, while in ours, as at present constituted, they can only attain that of captain. The French nation, always foremost, both in civil and military life, in recognizing the claims of our profession, honors her naval medical officers with the distinguished rank of admiral, and assigns them apartments similar to those occupied by the commander-in-chief of the squadron.

The claims urged by our naval brethren are, 1st, an assimilated rank with rear-admirals, as in other countries; 2dly, equality of pay and rewards; 3dly, quarters on board ship suitable to the dignity and importance of the men occupying these grades. When these claims shall be recognized and enforced, then, and not until then, can the government fill the corps of medical officers with honorable, intelligent, and scientific men, meet for the service of a nation whose flag floats in triumph over every sea in the known world.

We need in this country a naval medical school, conducted upon the same general principles as those in such successful operation at Toulon, Rochefort, and Cherbourg in France, where medical men may be prepared for the duties of naval surgeons, by suitable lectures and other exercises given by an able corps of professors. Some of the most brilliant naval and military surgeons of France, as Broussais and Larrey, not to mention others, received their education in these institutions. Such a seminary, surrounded with proper safeguards, could not, in the slightest degree, interfere with the interests of the regular medical colleges of the country, while its

beneficial effects in supplying the service with a more thoroughly trained corps of surgeons would be incalculable. There is just as much need of such a school as there is of a school for the education of sailors and officers of the line.

The necessity of having an annual register of the members of the regular profession of the United States has long been felt and generally acknowledged. The sanction by the Association of such a publication, or an expression of its belief in its necessity and usefulness, would go far in securing its early appearance, and its steady reissue afterwards. The London and Provincial Medical Directory, inclusive of the Medical Directory for Scotland and the Medical Directory for Ireland, has been in existence for upwards of twenty years, and the volume for the present year is a portly octavo of nearly one thousand pages. It embraces not only the names, residences, titles, and the date of the graduation of the physicians in the British kingdom, but the names and localities of its hospitals, asylums, infirmaries, and medical schools, an almanac, an obituary list, biographical sketches of eminent medical men, and a vast amount of other useful and interesting information. A work constructed upon this principle would be of incalculable benefit to our profession, in preventing mistakes in regard to consultations with irregular practitioners, at the same time that it would serve to bind its members into a firmer and closer union.

The establishment of societies for the relief of widows and orphans of indigent medical men is an object which commends itself to every member of this Association who has a heart to feel for others' woes, or the power to give from the abundance of his treasures. The number of such persons must necessarily be considerable. No man, however prudent, industrious, or provident, is exempt from misfortune; accident, disease, or domestic affliction may overwhelm him at any time, and thus a career, commenced under the most favorable auspices, with every prospect of great and rapid success, may eventually, in consequence of unforeseen and unavoidable circumstances, end in utter misery and penury. A man's property may be swept away in a single hour by flood or fire, and thus suddenly reduce him from a position of competency, if not of affluence, to one of actual want. Such cases appeal in the strongest terms to our sympathies and to the kindliest feelings of our nature. God has enjoined it upon every Christian to protect the widow and the orphan; and shall it be said of the physician, who spends his days and nights in preventing and mitigating suf-

fering, that he is less than a Christian; that he shrinks a duty so solemnly imposed upon him by every obligation of humanity and the common brotherhood of a great and noble profession? I pause for an answer, and everywhere, from the most remote recess of this hall, the words, No! No! resound in my ears. So be it. Thanks be to God, the Giver of all good, the protector of the poor and oppressed, the widows and orphans of medical men, trodden down by destitution and distress, shall hereafter have an advocate, warm, energetic, and indomitable, in every member of this great national congress.

I do not know with whom the idea of forming such societies originated; but it is an interesting historical fact that attention was prominently called to the subject by Dr. Benjamin Rush in an introductory lecture which he delivered in November, 1808, "On the Duties of Patients to their Physicians." "Our newspapers," he remarks, "often contain advertisements of the household furniture, books, and medicines of physicians for sale who have died in early or middle life. The widows and orphans of such physicians are often met with in reduced and humble situations; and of the small number of them who are wealthy and independent, how great a proportion have become so by fortunate marriages, successful speculation, or by extravagant exactions from their patients, and a sordid economy, alike disgraceful to humanity and the profession of medicine. From a view, such as has been given, of the sad reverse of situation to which the death of physicians often exposes their families, I applied many years ago to a gentleman in this city, eminent for his talent in calculating, for a plan of a fund for the support of the widows and children of physicians, to be created by a liberal subscription in the first instance, and small contributions to it afterwards during their lives." The object, however, thus so zealously advocated, failed, because the small number of physicians in Pennsylvania at that time rendered such an institution premature and impracticable. Dr. Rush expressed a hope, however, that as the profession increased, a fund for the purpose would be established in every State in the Union.

A society of this kind, the first, if I mistake not, ever established in this country, was instituted, through the active and benevolent exertion of Dr. Edward Delafield, in 1842, and incorporated the following year, under the name of "The New York Society for the Relief of Widows and Orphans of Medical Men." It has at present one hundred and thirty-four members, with a fund of $74,327,

invested in bonds, mortgages, and United States securities, and extends its aid to eight widows and three children of its deceased members. From a communication recently received from its venerable and distinguished founder, it appears that the interest in the success of the Society is steadily increasing, and the conviction is expressed that it will eventually embrace all the more respectable and influential members of the medical profession of the city of New York, as well as of Kings, Richmond, and Westchester Counties, which are included in the circle of its exertion.

I have long been of the opinion that there should be an association of this kind in every one of our States, with auxiliary branches in the principal towns and cities, the supervision of the entire matter being intrusted to the State and county societies. A small annual contribution from each member would soon furnish a large fund, which, properly applied, would dry the tears of many a widow, and afford her substantial solace in her declining years.

Considering the enlightened character of this Association, I do not deem it necessary to apologize for calling your attention to another topic, one which, although not directly connected with our profession, has, nevertheless, a most intimate relationship with its humane and benevolent practices. I allude to the establishment of veterinary colleges for the education of physicians and surgeons in order to qualify them for investigating and treating, upon correct, scientific principles, the diseases and accidents incident to domestic animals, especially the horse, cow, sheep, and dog, those creatures which minister so much to our comfort and happiness, and whose labor and products exert such a powerful influence upon the wealth and resources of a nation. It is a fact, as indisputable as it is honorable to us, that almost every enterprise, truly good and charitable, or in any wise calculated to ameliorate distress and suffering, has its origin, either directly or indirectly, in the medical profession. It is only necessary, in proof of this assertion, to refer to the numerous asylums, hospitals, infirmaries, almshouses, and dispensaries which everywhere greet the eye of the observer in all civilized countries, and which, in a vast majority of instances, not only owe their foundation, but also their perpetuity, to the energy, zeal, and benevolence of medical men. Our profession is eminently a profession of humanity, a profession which seeks to relieve distress and suffering in whatever form they may present themselves, whether in man, created in the likeness of his Maker, or in the dumb beasts that supply us with sustenance, plough our fields, furnish us with

the means of warming our bodies, and are our companions and friends; indeed, often our protectors. We owe the cow an everlasting debt of gratitude for having furnished us with the vaccine scab, by which millions of human lives are annually saved, to say nothing of the milk which she supplies to the starving infant, when the natural fountain of the mother is dried up. We institute—what is most just and praiseworthy—societies for the prevention of cruelties to animals; but we shamefully neglect, with now and then an honorable exception, to extend to them the care and sympathy due them when they are sick and injured, or threatened with the visitation of an epidemic malady, a plague or pestilence. Thousands and tens of thousands of animals, many of them of the most valuable character, annually perish for the want of proper hygienic knowledge on the part of their owners. An all-wise God has intrusted these dumb creatures to our care for the supply of our wants and comforts, and the least that a civilized people can do is to see that they are properly cared for when assailed by disease, too often induced by the restraints and annoyances of their dependent situation and the tyranny to which they are subjected by their keepers. Mankind, by universal consent, treat the horse and the dog with special kindness and regard, and often provide for their necessities long after they have ceased to be useful on account of infirmity and advanced age. "A righteous man regardeth the life of his beast, but the tender mercies of the wicked are cruel."

Our country has, thus far, made little progress in the education and proper training of veterinary physicians and surgeons. Most of the persons known as such, at the present day, are wholly ignorant even of the first principles of the art and science of veterinary medicine; they are the merest pretenders and charlatans, utterly unfit for the exercise of their important duties; in a word, they are simply a disgrace to their profession. Of the few veterinary colleges to be found in this country there is hardly one that is organized upon a proper basis. Europe, in this respect, is far in advance of us. While we have kept pace in medical science and practice with the most civilized and refined nations of the Old World, we have done literally nothing for veterinary medicine and surgery. France has not less than three or four of such establishments, one of which—that at Alfort, near Paris—has long been celebrated for the talents and scientific attainments of its professors. Great Britain, Prussia, Belgium, Russia, Austria, Hungary, Italy,

Switzerland, Sweden, and Denmark can all boast of great veterinary schools, with learned and effective courses of instruction, reflecting the greatest credit upon those engaged in them. The Royal College of Veterinary Surgeons of London, founded in 1719, and incorporated by royal charter in 1844, had, as appears by its recently published Register, up to 1866, sent out 2537 students, of whom 1696, scattered throughout the length and breadth of the civilized world, were still living at the date here referred to. To show the respectable character of this institution, I may say that the Board of Examiners consists of such men as Alfred Taylor, William Sharpey, George Viner Ellis, James Syme, J. W. Bigbie, and John Struthers, with a number of others whose names are less familiar in this country. The college is well endowed, and has six professors of great learning and ability. On the continent of Europe there are upwards of thirty veterinary schools in active operation, furnished with all the means and appliances for carrying on the most thorough and elaborate courses of instruction. The alumni of these institutions are perfect masters of their art, and treat the injuries and diseases of the inferior animals, especially those of the horse, ox, and dog, with as much skill and success as we treat the injuries and diseases of the human subject. In France the veterinary art is under the special patronage of the Académie des Sciences, one of the eleven sections of which holds frequent meetings for the enlargement and protection of its interests.

Up to 1863, over 3000 works had appeared on veterinary medicine and surgery. Of these Germany has supplied 809, France 433, Italy 183, Spain 103, England 164, and America about one dozen! Some of these productions are well known and highly appreciated. The treatises of the late Mr. Youatt, of England, enjoy a world-wide reputation; and the Dictionary of Veterinary Medicine and Surgery of Hurtrel D'Arboval, of which a new edition only recently appeared at Paris in six large octavo volumes, is a monument of industry, research, and erudition precious alike to veterinary and human medicine.

Among the latest and most esteemed German works upon the subject are those of Hertwig, Falker, Röll, and Spinola. The treatise of Mr. Gamgee on the rinderpest as it recently prevailed in England is a production of great labor and merit, affording the most complete history of that terrible and destructive malady that has ever appeared.

An extensive periodical veterinary medical literature exists. I

have time here only to allude to the Veterinarian, a journal published in Great Britain, and distinguished for the variety and excellence of its contributions, now in its fortieth volume; and to the Repertorium der Thiersheilkunde, commenced at Stuttgart in 1840, and of which, up to 1866, twenty-seven volumes had appeared.

Several treatises have been published upon medico-legal veterinary science, chiefly, if not exclusively, in the German language. Among the latest works of this kind is that of A. C. Gerlach, Professor in the Royal Veterinary School at Hanover. Homœopathic veterinary medicine and surgery appear to have thus far made little progress, either in this country, in England, or on the continent of Europe. In 1863, Dr. G. W. Schrader, of Hamburg, and Dr. Edward Hering, of Stuttgart, published a Universal Biographico-Literary Lexicon of Veterinary Surgeons, comprising upwards of two thousand names, and forming a closely printed octavo volume of nearly five hundred pages, illustrated with forty-three portraits and ninety-five autographs; a work in striking and painful contrast with our own want of concern about the honored dead of the medical profession.

Numerous veterinary medical associations exist both in Great Britain and on the continent of Europe; and the former country recently inaugurated a medical congress, embracing many of the most able and distinguished veterinary surgeons of the land. The subject of education and of reform is everywhere, as among us, engaging earnest attention.

The present period, so distinguished for all kinds of benevolent and charitable enterprises, is, it seems to me, particularly propitious for the establishment of veterinary schools, and I therefore recommend the subject most earnestly to your consideration. It is believed that the aid of the legislatures of the different States might readily be invoked through their respective governors by a committee of this Association whose views could not fail to carry great weight with them. Great attention is everywhere bestowed upon the rearing of stock and the improvement of the various breeds of horses and cattle; the agricultural resources of the country are becoming daily more and more developed; and agricultural societies are annually multiplying and extending the sphere of their usefulness. The benefits that would result from the labors of a body of thoroughly educated veterinary surgeons cannot be estimated. The saving of life and property would be incalculable. Professor Gamgee, of the Albert Medical College, of London, stated, only a short time ago,

in the Agricultural Committee of the House of Representatives, that the annual loss of domestic animals by disease was over $100,000,000, of which, he was satisfied, one-half might be saved by proper precautions and the services of well-educated veterinary surgeons.

The relations between human and veterinary medicine are probably much more close and intimate than can be determined in the existing state of our knowledge. We cannot tell what influence, if any, the diseases of the human race exert upon the inferior animals, or those of the latter upon the former. All that is positively ascertained is that their maladies, both benign and malignant, congenital and acquired, have much in common with each other. Some of the best and most instructive lessons in pathological anatomy that I have ever learned were derived from the study of the diseases of the inferior animals; especially those of the horse, dog, and hog. The various kinds of worms and hydatids which infest the human subject are all, probably, derived from the lower animals; no one can tell what damage trichinæ, lately the objects of so much patient labor and research, may have done to the human race; and it is not unlikely that future inquiry may determine the identity of glanders and syphilis. The fact, at all events, seems to be fully established that the former of these maladies was unknown in Europe until it broke out among the horses of the Spanish army in Italy, which has for centuries enjoyed the unenviable reputation of having imported venereal diseases into that country. Chairs of comparative pathology have long existed in some of the French and German schools. It is related of the illustrious Rayer, who died only a few months ago, and who has left behind him an unrivalled work on renal diseases, that he exercised at the Academy of Sciences of Paris, of which he was a most active and zealous member, the part rather of a veterinary investigator than that of a physician; and cases of a similar character, in which medical men derived free advantage from the study of the maladies of the lower animals, might be mentioned, if time permitted.

It has always appeared to me that there was a defect in our constitution in regard to the election of officers. The election, as now conducted, is virtually effected by the Committee on Nominations. Their report, so far as I know, has never, in a solitary instance, been dishonored. It has always been considered as final. My opinion is that the election should be by ballot, after open nomination, and that whoever shall receive the largest number of votes

should be declared to be the choice of the meeting. A similar course is pursued in other deliberative assemblies, clerical, legal, and political, and it hardly admits of doubt that the change would be attended with the most salutary effects, from its tendency to incite a spirit of emulation among the members of the Association that, under the present system, does not exist. Besides, it would effectually break up the custom, formerly so common, and attended with so much heartburning, of selecting the presiding officer from the physicians of the place of meeting.

By a resolution adopted a year ago restrictions of a stringent nature were placed upon the social intercourse of the Association during its annual meetings. It is questionable whether such exclusive legislation is calculated to further the object of these meetings—that of facilitating and fostering friendly intercourse among the members. All extremes are dangerous, and are sure soon to be followed by salutary reaction. Men are brought into closer relations at the social board than in a deliberative assembly; they see each other face to face, interchange friendly feeling, and look at each other in a kindlier spirit. The asperities of our nature, if any exist, are worn off by the social friction, and men forget that they have any interest except a common one. Too much indulgence of this kind is of course prejudicial to the interests both of the Association and to the great cause of medical science, and cannot be too pointedly condemned.

It must strike every one that the time of our meetings is too short: at least one entire week should be devoted to the object. As it is, we do little more than organize, shake hands, and separate. To discuss any question fully, or elaborately, is simply an impossibility. Our published Transactions afford a humiliating evidence of this haste and want of dignity.

I have introduced these topics, not a little varied in their character, in the hope that they may excite in you a deep and permanent interest. If some of them should be regarded as irrelevant, let it be borne in mind that they are all of a humanitarian nature, and therefore worthy of the serious consideration of such a grave and enlightened body, intrusted with the guardianship of the American medical profession.

Since the close of our last meeting death has been busy among our ranks. It has struck from our rolls the names of Henry H. Childs, James Jackson, and J. Mason Warren, of Massachusetts; William Gibson and Wilson Jewell, of Pennsylvania; Worthing-

ton Hooker, of Connecticut; Robert Watts, Howard Townsend, John P. Batchelder, and Isaac Wood, of New York; Jesse P. Judkins and Joseph Fitch Potter, of Ohio; together with a number of others, of less note, but of great usefulness, and of equally honorable character as practitioners and citizens. America never before had occasion to deplore, within so short a time, the death of so many distinguished physicians. In recalling the names of these good men, co-workers with us in the great interests of medical science and of medical reform, let us mingle our tears with those of their relatives and friends, "breathe a benison o'er their sleeping dust," and entwine the lily with the evergreen in commemoration of the purity of their lives and their undying fame as distinguished members of a great and noble profession. "Vita enim mortuorum in memoriâ vivorum est posita."

While we thus drop the tear of affection and esteem at the tombs of our own countrymen, endeared to us by a thousand agreeable personal recollections, let us not forget to pay a similar tribute to our foreign brethren, among the most conspicuous of whom are Civiale, Jobert, Velpeau, Trousseau, Chomel, Follin, Rayer, Flourens, Jarjavay, and Roger, of France; Szegmanowsky, of Russia; Turck, of Austria; and Lawrence, Brinton, Teale, Arnot, Faraday, Davy, and Elliotson, of England; men who, after having borne the heat and burden of many summers, and added lustre to the nations which they respectively represent, during the last twelve months departed this life, full of honor and renown. Their names, many of which are associated with our earliest memories by their labors and their writings, are inscribed upon the scroll of fame, and are destined to live forever in the esteem and gratitude of mankind. The same God's acre, broad as earth itself, enshrouds their mortal remains as those of their American brethren, the same flowers grow upon their tombs, and the same halo of glory encircles their brows.

REPORT

ON

RECOMMENDATIONS AND SUGGESTIONS

CONTAINED IN

PRESIDENT'S ADDRESS.

REPORT ON RECOMMENDATIONS AND SUGGESTIONS CONTAINED IN PRESIDENT'S ADDRESS.

THE Committee appointed to report on the recommendations and suggestions contained in the President's Inaugural Address, beg leave respectfully to report—

That they have as carefully considered the various topics discussed therein as the short time allotted them would permit, and would state that they fully concur in regard to the importance of the different subjects treated of and the recommendations made.

1. In regard to the "character of our *Transactions*," the views expressed by our President are doubtless those entertained by the members of this Association generally; and we can see no objection to the plan recommended being adopted, viz., that "the Committee of Publication should be invested with plenary powers in regard to all papers *not read before the Association, or in the Sections*," and would respectfully advise its adoption in future. If the "additional ordinances," passed in May, 1867, in regard to the character of papers accepted for publication, at our meeting at Cincinnati, be fully carried out, as we have no reason to doubt they will be hereafter, the character of our *Transactions* will be essentially elevated and improved, while the bulk of the volumes will be greatly reduced and the expense proportionately diminished.

2. In regard to the topic of "*Medical Education*," as the Committee on this subject have not yet made their report, and as it is understood they have carefully considered the whole matter, we deem it proper to leave it for consideration after their report has been presented.

3. The subject of medical testimony in our courts of justice is one which calls for the most careful deliberation of this body. In the opinion of your Committee there is no cause which has done more to lessen the confidence of the community in the medical

profession than the manner in which physicians often give testimony before our courts. As our profession is constituted, and with the present views in regard to their duties to their clients entertained by the legal profession, we know of no remedy to meet the case except by the adoption of the plan recommended by our President, namely: the appointment of "a commission in every judicial district, whose duty it shall be to aid in the examination of witnesses in every trial involving scientific testimony." The subject is of so much importance that they would advise its reference to a special committee, to report upon it either at the present or the next meeting of the Association.

4. In regard to the matter of "*The Grade and Pay of the Medical Corps of the Navy,*" an able report has been presented by Dr. N. S. Davis, chairman of the Committee on this subject, since the delilivery of the President's Address; and no farther action in regard to the matter seems to be called for at present than carrying out the measures recommended by that Committee.

5. The importance of having an "*Annual Register of the Regular Profession of the United States*" is universally recognized, and your Committee would recommend that a resolution be adopted by this Association expressive of its belief in its necessity and usefulness, and refer the matter to a committee to report in regard to the necessary measures to carry it into effect.

6. The establishment of societies for the relief of the widows and orphans of medical men is worthy of our careful consideration. To carry out this object over the United States generally should be the aim of this Association, but it is questionable in the minds of your Committee whether the same plan which has succeeded in New York would be practicable in country districts. It is worthy of serious inquiry whether the plan adopted by many of our co-operative societies and the Metropolitan Police of New York, which numbers many hundred members, would not be the best to secure the desired object in our profession, viz., the payment of a small sum—say, of $1 annually—into a common fund, by each physician of the State, county, or city. This would secure to each family of a deceased physician a sum ample to relieve their necessary wants, while its payment would not be felt by any one. Such societies may be composed of the physicians of a State, or county, or several counties, according as the population and other circumstances may seem to require.

7. In regard to the establishment of one or more Veterinary Col-

leges in the United States, your Committee would advise that the subject be referred to a special committee of three, to be appointed by the Chair, to digest a plan, etc., and report at the next meeting of the Association.

8. Upon that portion of the Presidential Address recommending a change in the mode of electing officers, your Committee beg leave to say, that they have learned with pleasure that the Committee on the Revision of the Constitution have already agreed upon a report which suggests changes as regards the election of the President, which will, it is believed, fully meet the views of the President and the approval of the Association.

9. The only other subject particularly alluded to, viz., the importance of educated nurses for the proper care of the sick, is one which deserves an expression of opinion on the part of this body, and we would, therefore, recommend the adoption of a resolution of approval of the views set forth by our President.

All of which is respectfully submitted.

CHARLES A. LEE, *Chairman.*
D. FRANCIS CONDIE,
WASHINGTON L. ATLEE.

In accordance with the above views, your Committee would recommend the adoption of the following resolutions:—

1. *Resolved,* That the "Publishing Committee" are hereby invested with plenary power, in *regard to all papers not read before the Association, or in the Sections,* to publish or not, as may seem expedient.

2. *Resolved,* That a committee of three be appointed by the Chair to take into consideration the subject of the appointment of a commissioner in each medical district or circuit, whose duty it shall be to aid in the examination of witnesses in every trial involving medico-legal testimony, and to report at the next meeting of the Association.

3. *Resolved,* That a committee be appointed to report next year, in regard to the subject of an Annual Register of the regular profession in the United States, and in the mean time to take necessary measures to carry the plan into effect.

4. *Resolved,* That a committee be appointed to take into consideration the subject of the best mode of providing a fund for the relief of the widows and orphans of deceased physicians, and report to the Association at the next meeting.

5. *Resolved,* That a committee of three be appointed to take into consideration the subject of the establishment of Veterinary Colleges, and report at our next meeting.

6. *Resolved,* That all hospitals and public institutions for the care and treatment of the sick should have educated, well-trained nurses only, and that this Association would strongly recommend the establishment, in all our large cities, of nurse-training institutions for the sick.

REPORT

OF THE

COMMITTEE ON THE RANK AND REGULATIONS OF THE MEDICAL STAFF OF THE U. S. NAVY.

BY

N. S. DAVIS.

REPORT OF THE COMMITTEE ON THE RANK AND REGULATIONS OF THE MEDICAL STAFF OF THE U.S. NAVY.

At the Annual Meeting of this Association, held in Cincinnati, May, 1867, the following resolutions were adopted:—

"*Resolved*, That a special committee of five members be appointed by the President, to present this subject (the matters embraced in the report of Dr. W. M. Wood, U. S. N.) before the President of the United States and the Secretary of the Navy, and urge the adoption of the changes proposed."

"On motion of Dr. A. C. Post, of New York, this Committee were instructed to memorialize Congress on the subject of awarding *prize money* to medical naval officers."

The Committee appointed in accordance with the first of these resolutions consisted of Drs. N. S. Davis, of Illinois; J. M. Toner, of District of Columbia; S. D. Gross, of Pennsylvania; J. J. Cockrill, of Maryland; and H. F. Askew, of Delaware.

The appointment of this Committee had escaped the attention of its chairman until a comparatively recent period of time. Immediately after his attention was accidentally directed to the subject, the duties enjoined were performed by printing a sufficient number of copies of the report of Dr. Wood, to supply the President of the United States, the Secretary of the Navy, and each member of the two Houses of Congress. To the President of the United States and the Secretary of the Navy copies of the report were sent, with a letter attached to each, explaining the wishes of this Association and respectfully urging the adoption of such changes in the rank and regulations of the medical staff of the navy as would relieve the members of that staff from the evils justly complained of in the accompanying report. To each member of the Senate and House of Representatives a copy of the report was sent, with a *petition* attached, asking their attention to the report, and especially that part relating to the distribution of *prize money;* and urging the enactment of such laws as would secure to every

medical officer in the naval service a *just share* of the prize money distributed to non-medical officers with whom he might be serving. By these means your Committee has endeavored to bring the subjects under consideration as fully before the whole Executive and Legislative Departments of the Government as possible.

All of which is respectfully submitted in behalf of the Committee.

REPORT

OF

COMMITTEE ON MEDICAL ETHICS.

REPORT OF COMMITTEE ON MEDICAL ETHICS.

On the 12th of the present month, *i. e.*, eighteen days since, the undersigned received a communication from the Permanent Secretary of the American Medical Association, informing him that, as Dr. Smith of New Jersey and Hooker of Connecticut had both died since the last meeting of the Association, it would be necessary for the undersigned, with his two colleagues, Drs. James Kennedy, of New York, and A. S. McArthur, of Illinois, to make a report upon the following matters, as thus expressed in the Secretary's letter: "The matter of Female Physicians, Atlee's resolutions thereon, page 43, and J. Homberger's resignation, page 44. The last is necessary, as he is still a member and advertising freely." Although less than a month was to elapse before the meeting, the undersigned was unwilling to neglect an obvious duty, especially one devolving upon him by the death of his excellent colleagues.

He accordingly immediately addressed letters to Drs. Kennedy and McArthur, asking their opinions by return of mail, upon the subjects, and stating briefly his own in order to save delay in making the full report. The undersigned regrets that he has received no answer from either of the gentlemen. Accordingly, he is obliged to present this report possibly without their signatures, an unavoidable fact, which he deeply regrets.

On turning to the references made by the Secretary to the last year's proceedings of the Association, the undersigned finds that he can obtain only very imperfect ideas of the real nature of the questions referred to the Committee.

If the members of the Association will consult pages 31 and 43 of last year's proceedings, they will see that Dr. Atlee, of Pennsylvania, brought forward, according to the words of the record, "certain regulations relative to female practitioners, which, on a point of order, were (May 9, page 43) laid upon the table." "On

May 10 (page 44) they were brought up again and discussed by Drs. Pallen, Davis, and Bowditch, and they were, on motion of Dr. Davis, referred to the Committee on Medical Ethics."

The undersigned cannot get from the above words any clue to the *exact nature* of the resolutions, and he has to fall back upon his memory, which may be imperfect as to the precise words used by Dr. Atlee. The proposition of that gentleman is, however, believed to involve the question whether or not it be proper and right for members of this Association to consult with well-educated women, who have studied and received degrees or diplomas from properly constituted medical schools.

If this be the exact question, the undersigned has thereupon not the least doubt. He believes that every member of this Association has a right to consult with any regularly and thoroughly educated practitioner of medicine, whether male or female. The members will remember that this question has nothing to do with what some may deem an anterior question, nor the propriety or otherwise of women studying medicine either in the common schools of our profession or in schools specially arranged for women. The simple question is, supposing any really intelligent woman like Madame Boivin, in France, the friend of Chaussier, and colleague of Dugès in the publication of a magnificent work on Diseases of the Womb, and whose text-books were translated into German and were used throughout Germany; like Madame Bourgeois, the medical attendant of Mary de Medici, and who was the chief accoucheur at the birth of a dauphin of France; like Elizabeth Nihele, who, educated at Hôtel Dieu, dared, on her return to England, to measure her powers with the celebrated accoucheur Smellie, and actually defeated him with his absurd manikin and womb filled with beer; or, still further, one like the far-famed Merandi of Bologne, who in 1758 held the chair of anatomy at her native city, and who become so noted that she was sought for by several other institutions, and was visited by crowds of students, by learned men, and even by the Emperor of Austria as he passed through the city; supposing, we say, any woman endowed like these with strong original calibre of intellect, and that enriched by the widest culture and which the world should acknowledge, should ask a consultation with any member of this Association, surely there could be no valid reason for a refusal, unless, indeed, the fact of sex alone should be deemed reason enough to satisfy a *reasonable* mind.

The undersigned can perceive neither justice nor logic in such a refusal. Let us consult our Code of Ethics and try to interpret them. In our code the masculine gender is indeed used in the article relating to the consultations of physicians, but this is always so used in all statute laws passed by legislative bodies; yet they embrace, of course, alike men and women in their rules and in their penalties. It is a common term, and corresponds to the general term, *mankind*, which term certainly includes the idea of male and female. This being admitted, the undersigned would refer to the above article, and he finds the following words: "A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements; and ought to be the only acknowledged right of an individual to the exercise and honors of his profession." Bearing in mind the previous remarks upon the proper interpretation of the use of the masculine gender in alluding to medical practitioners, the undersigned feels that according to the rules of reason unbiassed by prejudice, as applied either generally or to the above article of our code, he has no right to refuse a consultation simply on the ground of sex. If the Association does not adopt this view, it ought for consistency's sake forthwith to publish an explanatory amendment to its code, and to declare explicitly that its Ethics do not include mankind, but only men; in other words, the Association of learned and benevolent men should forthwith stultify itself by declaring that however learned, however skilled in our art, however virtuous a person may be, if that person be a woman and claims to practise medicine, we as a body will have nothing to do with her. For example, even if the severest forms of labor be actually occurring, and the fate of mother and child may seem to call upon us to aid a practitioner possibly quite as learned as ourselves, still, as that practitioner is a woman, we must decline so to do, and by default, perhaps, consent to the occurrence of death; and all this in obedience to a law of this Association. The undersigned cannot believe that any body of intelligent and humane men would consent to such a result; and yet to such a result some person may arrive unless the Association admit of a consultation, or the medical practitioner, thus called in the hour of highest danger, should trample under feet all laws as null and void by their essential injustice, which would dare to criminate a practitioner for such an act.

Other arguments might be adduced to meet other objections, but

as this already given is the broadest ground on which the undersigned can rest the case; as it virtually excludes, or at least materially opposes all minor questions of "taste," of "physiological law," of "gallantry," etc., which have been urged, and as most of these latter arguments, when thoroughly sifted, are seen to be based not on reason but simple prejudice, the undersigned closes this part of his report with the statement that appended to it will be found a resolution which is proposed for adoption by this meeting.

In regard to the second subject referred to the Committee, viz., the resignation of Dr. Homberger, the undersigned regrets to say that from the record of last year's proceedings, to which the secretary refers, he can gain little that is exact. On page forty-four is the following:—

"A communication from Dr. Julius Homberger, of New York, expressing his desire to resign from the Association, was presented by the Permanent Secretary, who stated that it had been received by him on the evening of the last day of the session of the Association last year at Baltimore, after the final adjournment. After discussion, it was finally referred to the Committee on Medical Ethics."

The only inferences one can draw from this record are, viz., that Dr. Homberger resigned his membership of the Association two years ago, which, for some reason unknown, was not accepted. Second, Dr. Homberger's communication was referred to the Committee on Medical Ethics.

As the undersigned has never seen that communication, he feels doubtful as to its precise terms. Nevertheless, as this Association has never claimed the right to hold any member bound *always* in his allegiance, and as there is nothing in our rules to prevent a man, for reasons best known to himself, from retiring from our body, the undersigned feels disposed to recommend the acceptance of Dr. Homberger's resignation as the easiest and most profitable way of deciding the question.

What other course can be pursued so wise as this, viz., to let Dr. Homberger retire quietly with, perhaps, a note from the Association, if thought best, that the course pursued by any member of the Association contrary to Section 3, Article 1, of that part of our code referring to "the duties of physicians to each other and to the profession at large," is entirely inconsistent with honorable membership.

This remark naturally brings up the much vexed topic of the propriety of advertising at all. And as the undersigned had the honor to state definitely his views in a previous report upon that

special subject, he forbears to enlarge at present any further than to say that he proposes a resolution herewith appended, embodying his precise views in reference to Dr. Homberger's case.

Resolved, That the question of sex has never been considered by this Association in connection with consultations among medical practitioners, and that in the opinion of this meeting, every member of this body has a perfect right to consult with any one who presents the "only presumptive evidence of professional abilities and acquirements" required by this Association, viz., "a regular medical education."

Resolved, That the resignation of Dr. Julius Homberger, of New York, be accepted, and that all further consideration of him or of his peculiar methods of procuring practice be indefinitely postponed.

Respectfully submitted,

HENRY I. BOWDITCH,

For the Committee on Medical Ethics.

APRIL 30, 1868.

NEW YORK, 4th May, 1868.

DEAR DOCTOR:—

By some unaccountable blunder on the part of the post-office officials, your letter of the 15th April was not received till last evening. I hope it will make no difference in making your report.

On the two subjects proposed in your note I fully concur with you. I am willing to meet in consultation "a thoroughly educated female physician." As to Dr. Homberger, let him go, if he wishes to do so.

Very respectfully,

J. KENNEDY,

42 Laight Street.

REPORT

OF THE

COMMITTEE ON PRIZE ESSAYS OF THE AMERICAN MEDICAL ASSOCIATION.

REPORT OF THE COMMITTEE ON PRIZE ESSAYS.

YOUR Committee on Prize Essays, appointed at the last meeting of the Association, in the month of May, 1867, beg leave to report that, shortly after the adjournment of your body, the design of the American Medical Association of offering two prizes of one hundred dollars each, as the awards for the best two essays of professional interest presented for the consideration of your Committee, was duly published in our local, as well as in the other leading medical journals of the country. In this notice to the profession, the Committee reserved to themselves the right to reject all such essays, unless deemed by them fully worthy of their acceptance.

In response to these advertisements, four essays have been presented for this honorable competition; and in all of them a praiseworthy emulation has been exhibited and many valuable suggestions made. But your Committee, feeling the responsibility of their position, and being fully conscious that the object of the Association in offering its honorary awards was to stimulate its members to original researches, based especially upon well-arranged experimental inquiry, and not finding such expectations realized, in any of the competing productions, they beg leave to decline suggesting the award of either of the offered prizes.

Your Committee regret the necessity of this decision, not so much on account of the probable imputation of their being hypercritical, but because they can fully appreciate the great industry and practical knowledge evinced in the preparation of these contributions to medical literature.

Inasmuch, however, as your Committee have not been able to discover in these essays any contributions of new facts or principles calculated materially to enlarge the field of professional knowledge, they have been compelled to exercise their reserved prerogative of declining to receive each and all of the essays offered in competition.

Your Committee would unanimously suggest to the Association the propriety of consolidating the two prizes of one hundred dollars each into one prize of two hundred dollars, under the impression that by such change an additional stimulus might be given to experimental as well as practical demonstrations.

CHARLES WOODWARD,
ROBERTS BARTHOLOW,
EDWARD B. STEVENS,
W. W. DAWSON,
P. S. CONNER.

REPORT

OF THE

COMMITTEE TO REVISE THE PLAN OF ORGANIZATION.

BY

CHRISTOPHER C. COX, M. D., LL. D.

REPORT OF THE COMMITTEE TO REVISE THE PLAN OF ORGANIZATION.

THE Committee appointed to take into consideration such amendments or alterations in the plan of organization as may tend to remedy existing defects, and increase the efficiency of the Association, upon a careful review of the duty assigned them, respectfully submit the following report:—

II. MEMBERS.

In this section, second paragraph, fourth line, insert after the words "United States" the words "from the army and navy."

In fifth paragraph, third line, insert after the word "member," the words "or whose name shall have been, for non-payment of dues, dropped from the rolls of the same;" in fifth line (same paragraph) after the word "sentence," read "or disability;" in sixth line, after the word "society" add the following: "Or shall have paid up all arrears of membership; nor shall any person, not a member and supporter of a local medical society, where such a one exists, be eligible to membership in the American Medical Association."

In seventh paragraph, fifth line, strike out the remainder of sentence after the word "by" and insert the words "at least three of the members present, or three of the absent permanent members." In ninth line, after the word "delegates" add the words "except the right to vote."

In eighth paragraph, fifth line, add after the word "delegates," the words "and comply with the requirements of the by-laws of the Association."

In ninth paragraph, third line, insert after the word "must" the words "exhibit his credentials to the proper committee."

III. MEETINGS.

In first paragraph, third line, strike out after the word "shall" the words "never be the same for any two years in succession, and shall."

After the ninth paragraph insert the following new sentence: "Corresponding members shall consist of such medical gentlemen, eminent in their profession, residing out of the United States, as the Association shall, from time to time, elect."

IV. OFFICERS.

In first paragraph, third line, after the word "Treasurer" insert the words "and Librarian." In second line, after the word "Secretary" strike out the article "and." In third line, after the word "Librarian" insert the following new sentence: "The President shall be nominated and ballotted for in open convention, and shall be elected only from those who have attended at least five annual meetings of the Association; and if, on the first ballot, no person receives a majority of the votes cast, the second ballot shall be confined to the three highest on the list; should no choice be then made, the candidate lowest on the list shall then be dropped. In the event of a tie on the third or succeeding ballot, the President shall decide by a casting vote."

In third line, strike out the word "they" and insert the words "the remaining officers."

After eighth paragraph insert a new paragraph as follows: "The Librarian shall receive and preserve all the property in books, pamphlets, journals, and manuscripts, presented to or acquired by the Association; record their title in a book prepared for the purpose, acknowledge the receipt of the same, and he shall also be a member of the Committee of Publication."

V. STANDING COMMITTEES.

In second paragraph, second line, insert after the word "members" the words "of whom the Assistant Secretary shall be one."

In third paragraph, first line, strike out the word "and." In second line, after the word "Treasurer" read "and Librarian."

VI. FUNDS AND APPROPRIATIONS.

In first paragraph, fifth line, insert after the word "the" the words "delegates and permanent." In same line strike out the word "individual."

VII. PROVISION FOR AMENDMENT.

In the first paragraph, fourth line, strike out the word "members," and insert the word "delegates."

BY-LAWS.

III. STANDING COMMITTEES.

In second paragraph, ninth line, strike out all after the word "resolution."

In third paragraph, fourth line, after the word "receive" insert the word "original." In same line, after the word "any" insert the word "medical."

In third paragraph, eleventh line, strike out the word "volunteer" and insert the word "*original.*"

In sixth paragraph, second line, after the word "*State*" insert "and Territory." In fourth line strike out the words "our country" and insert the words "their respective States and Territories." In same line strike out all after the word "and" and insert the words "shall transmit them to the chairman of this committee, on or before the first of April of each and every year."

V. ASSESSMENTS.

In first paragraph, third line, insert after the word "members" the words "whether attending or not." In fourth line strike out the word "the," and in same line all after the word "expenses" to the end of the sentence.

In second paragraph, first line, strike out all after the word "invitation" and insert the following sentences: "Permanent members not in attendance will transmit their dues to the Treasurer. Any permanent member who shall fail to pay his annual dues for three successive years, unless absent from the country, shall be dropped from the roll of permanent members."

VII. DELEGATES TO FOREIGN MEDICAL SOCIETIES.

In first paragraph, fourth line, after the word "Europe" insert the words "or other foreign countries."

X. OF THE PREVIOUS QUESTION.

When the previous question is demanded it shall take at least twenty members to second it, and when the main question is put under force of the previous question and negatived, the question

shall remain under consideration the same as if the previous question had not been enforced.

The resolution, p. 42 of printed *Transactions*, referred to this Committee, has been chiefly incorporated into this report.

The resolution of Dr. Hibbard, p. 43 of the printed *Transactions*, also referred to this Committee, is in their judgment more immediately connected with the ethics of the Association, and they therefore respectfully recommend its reference to the Committee having that subject in charge.

CHRIS. C. COX, *Chairman*,
J. M. TONER,
J. J. WOODWARD.

REPORT

OF THE

COMMITTEE ON MEDICAL EDUCATION.

REPORT OF THE COMMITTEE ON MEDICAL EDUCATION.

THE Committee on Medical Education regret to report that the various questions respecting this subject, which for so long a period have demanded the attention of the American profession, have not yet received a practical solution. Although the subject of medical education, the securing of uniformity of its methods and requirements, and of concerted action for its improvement, called into existence this Association, and reports and discussions upon it have constituted an important part of its yearly transactions; although in these reports and discussions almost every aspect of the subject has been presented, and every argument and persuasion exhausted; although all must have felt the importance, for the honor and success of the profession, that in the general advancement of education and knowledge among all classes, a corresponding advancement should be made in the education of medical men; although none could fail to perceive that, in the recent vast enlargement of the field of medical science, an increase of time must be required for properly traversing it; although our national pride has been appealed to by comparing the lengthened and extended courses of instruction in European countries with the short and meagre courses in our own; yet no standard of preliminary education has been established; the length and number of the terms of instruction in our medical colleges have not been materially increased, the curriculum of subjects has not generally been enlarged, no order in the succession of studies has been secured, no more written exercises have been generally required to test educational and logical qualifications, final examinations are scarcely more rigid; and, in short, though there are exceptions in some cases and in some particulars, the *status* of medical education among us, so far as the positive requirements of the schools are concerned, has scarcely advanced since all this agitation commenced; certainly no advancement has

been made commensurate with the repeated recommendations put forth, or the imperative demands of the case.

To enter into the reasons of this failure would open an interesting field of inquiry. In the more central and absolute governments of Europe, the educational requirements of practitioners of medicine are established by law, and uniform standards are enforced. In our system of government of different States with independent legislatures regulating local affairs, no uniformity of laws on the subject exists; and popular ignorance of medicine, of its wants and claims, together with a jealousy of the granting of special privileges, and a restless desire of innovation, have resulted in the abrogation of all laws in many of the States regulating the profession; and in the absence or inefficiency of laws, the rivalry of schools bidding for students, who too often select those schools which offer the greatest facilities for graduation, rather than the amplest means for instruction; a reluctance on the part of those managing the schools to change established customs, and difficulties through jealousy and diversity of circumstances in securing concert and uniformity of action, have heretofore presented insuperable barriers to proper advancement; and it is to be feared that a want of appreciation or a reprehensible indifference to the real interests of the profession and of humanity, and that lack of wisdom which causes so many of our imperfect race to choose evil rather than good, have produced their effects here as in so many other human affairs. When we consider all the political and social evils which have grown up and been sustained in civilized communities, our surprise at the imperfection of medical education may be diminished though our regret be none the less. A sense of the intrinsic need of reform, and a comparison of our system of medical education with those of the civilized countries of Europe, have excited to efforts heretofore, and must continue to do so in those having regard for the honor of the profession and the country, and the interests of the community, until the object is accomplished.

The most recent special effort for such reform was made in a convention of medical teachers which was held at Cincinnati, by the advice of this body, a year since. After some days of discussion, a plan was put forth providing for a somewhat definite amount of preliminary education, the lengthening of the term of medical pupilage to four years, the requirement of attendance upon three annual courses of lectures of six months each, the increase of the number of studies in the curriculum, and an increase of the

number of professors; and for an arrangement of a succession of studies through these three years, the different subjects being pursued in a somewhat logical order.

This plan, though containing many excellent features, must be considered as a rather hastily conceived ideal decidedly in advance of realization. Its almost unanimous adoption by the delegates of the schools, and an equally decided approval by this Association, must be regarded as an expression of a general conviction of the necessity of reform in medical education, rather than a specific recommendation of the details which it embraces; for though urged upon all the schools for their definite action, it has met with an affirmative response from very few of them, and there is no apparent prospect of its general adoption. In the judgment of your Committee, some of its main features are, at least, questionable; it has imperfections in its details, and it is quite impracticable in the present state of the profession among us. Some of the changes the plan proposes, and generally regarded as desirable, are believed to be too great to be soon accomplished; and besides other defects, no provision is made in the plan for a *repetition* of any of the lectures to the same students. A repetition of medical lectures, especially upon the more important subjects, is generally deemed, both by teachers and students, as being exceedingly important for securing clear and correct conceptions of the facts and principles, and a deep impression of them upon the mind.

After years of experience and reflection, and in accordance with convictions long existing, the following plan is respectfully suggested as a modification of that under consideration; and it is brought forward with the hope that its provisions will commend themselves to the judgment of the profession, will be regarded as suited to our present condition, and will receive a practical indorsement from the schools of the country.

So far as applicable, the arrangement and language of the former plan are retained.

PRELIMINARY REQUIREMENTS.—Every student applying for matriculation in a medical college shall be required to show, either by satisfactory certificates or by direct examination by a committee of the Faculty, that he possesses a proper moral and intellectual character, a good English education, including a proper knowledge of the English language and a respectable acquaintance with its literature, and with the art of composition; the more

elementary mathematics, including the chief elements of algebra and geometry, the elements of the natural sciences, and such a knowledge of language as will enable him to readily acquire the technical terms of the profession; and the certificates presented, or the results of the examination thus required, shall be regularly filed, together with evidence of the time of commencing medical studies, as a part of the records of each medical college.

TIME OF MEDICAL STUDIES.—The regular period of medical pupilage shall be three and a half years; deducting, however, six months of time of study in the case of those students who may be graduates of respectable colleges requiring four years of the higher studies to complete the course; and during this time of study the students must attend two regular courses of medical college instruction, before being admitted to an examination for the degree of Doctor of Medicine.

LENGTH OF LECTURE TERMS.—The minimum duration of a regular lecture term shall be eight months.

SUBJECTS OF CURRICULUM, AND ORDER OF THEIR ARRANGEMENT.—Every medical college shall embrace in its curriculum the following branches, viz: Descriptive and Practical Anatomy, Physiology and Histology, Chemistry, Inorganic and Organic, Urinology and Toxicology, Materia Medica, General Therapeutics, General Pathology, Pathological Anatomy, Surgical Anatomy and Operations of Surgery, Hygiene, Medical Jurisprudence, Psychological Medicine, Medical Ethics, Practice of Medicine, Practice of Surgery, Obstetrics, Diseases of Women, Diseases of Children, Clinical Medicine and Clinical Surgery; and these several branches shall be divided into two groups or series:—the more elementary subjects, viz., Descriptive and Practical Anatomy, Pathological Anatomy, Chemistry, Physiology and Histology, General Pathology, General Therapeutics, Materia Medica and Hygiene, being chiefly taught during the first four months of the course, while the more advanced and practical branches, viz., the Practice of Medicine, Practice of Surgery, Obstetrics, Diseases of Women, Diseases of Children, Clinical Medicine and Clinical Surgery, Urinalysis, Toxicology, Medical Jurisprudence, Psychological Medicine and Medical Ethics shall be chiefly taught during the last four months of the course.

CERTIFICATES OF ATTENDANCE UPON LECTURES, ETC.—Every medical college shall adopt some effectual method of ascertaining the actual attendance of students upon its lectures and other regular exercises, and also before graduation, of the actual time devoted to the study of medicine out of college; and at the close of each college session, or of the attendance of the student, a certificate, specifying the time and the courses of instruction actually attended, shall be given, and such certificates *only* shall be received by other colleges as evidence of such attendance.

This plan contemplates a positive and respectable standard of preliminary education; a longer time of professional study; a systematic and successive order of studies; a certain amount of clinical instruction, and a *repetition* of the courses of lectures to the student, thereby securing the correction of misapprehensions, a more thorough understanding of the various subjects, and a more permanent lodgment of them in the memory. The practical working of this plan, it is believed, will be found free from serious objections. No one teacher will be required to be occupied for a larger portion of the year in delivering his lectures than in the present prevailing mode of conducting medical schools. The management of fees will be perfectly simple and in accordance with present customs; and, in short, should it receive the deliberate approval of the profession and the schools, no serious obstacles can be seen to its speedy adoption. Shall we not take this step forward and relieve ourselves from the weight of just reproach which now rests upon us?

If the mass of the schools hesitate, or refuse to combine in the onward movement, which *one* of them will first step forward, and, appealing to the interests of students to be benefited, and the liberality of an enlightened profession to be elevated, secure to itself a richly deserved success and a halo of imperishable honor?

In different European countries, but particularly in England, besides the qualifications required of all who enter the profession, various honorary degrees and titles—fellowships of societies, and the like distinctions—are conferred upon those who possess superior preliminary qualifications, and pursue with that object a more thorough course of professional study, and who undergo more rigid examinations. Whether the creating of definite distinctions among members of the profession, not obtained by actual success in independent professional labor, would be as favorably regarded in our country as in others, where greater distinctions in all de-

partments of life are recognized, may be questioned; but the stimulus that would be given to some to more thoroughly prepare for the high duties of the profession by such rewards of superior merit, if carefully preserved from degenerating into rewards for superior favor, would certainly, in itself, be most desirable. Should the experiment of conferring such distinctions be tried, its practical workings would soon be tested. Whatever its merits, however, it will not answer the most urgent demand for higher attainments in *all* who enter the ranks of the profession, thus elevating the common fraternity. This certainly ought to be done, whether or not the others should be left undone.

The two members of the Committee who have responded to the request of the chairman to forward their views on the general subject of the report, have strongly expressed opinions favorable to the separation of the licensing and teaching functions, lodging them in different hands.

This plan prevails in most of the older civilizations, where these matters are strictly regulated by law. There are doubtless many reasons for such separation, and it can readily be carried into practice where efficient laws are in operation on these subjects; but in our country, to secure a uniform regulation by law would require the harmonious action of some forty different legislative bodies; and our experience with legislatures has been such as to lead us to expect as much evil as good from their interference. At present the profession must regulate their own affairs; and it is to be apprehended that there will be much difficulty in inducing the schools to yield the privilege of controlling the conferring of degrees upon their own students.

Besides, the system of entire separation of teaching and examining is not without some practical objections. In England, the complaint is made that the views of the examining boards are often so different from those of the teachers, that the student is obliged to specially prepare for his examinations by the vicious system of *cramming*, not depending upon his long course of instruction received from his proper teachers. This must tend to induce indifference to these instructions; and certainly the teachers, who have had the pupil long under observation, and have submitted him to frequent examinations, as they should do, during his course, must be better judges than others, of his character, his faithfulness, and his qualifications. Still, for other reasons, which have been so often stated in former reports as to render now their repetition

unnecessary, it is strongly recommended that the professors of medical colleges associate with them others outside of their Faculties in examinations and votes for the degrees.

The necessity of clinical instruction has been largely dwelt upon in former reports, and your Committee fully agree with most that has been said upon the subject. Its importance in a complete course of instruction can scarcely be exaggerated; but they are very strongly impressed with the absurdity of regarding that as proper clinical instruction which is received by students during a four or five months' course, going over the entire range of elementary medicine. Clinical medicine cannot be properly pursued while the student is listening to from five to seven didactic lectures a day, upon as many different subjects. Besides, attending to clinical matters in a hospital before the elements of the science are mastered is comparatively fruitless, even were proper time allowed. The common result of much of our clinical instruction is to confuse the student, divert his attention from elementary subjects, and prevent his becoming thoroughly grounded in them, thus making him a superficial and unscientific practitioner. It is far less dangerous to neglect clinical than elementary matters in a course of medical instruction. The defects of the former may be made up in after life; those of the latter almost never are. An imperfect superstructure may readily be improved; a radically defective foundation is fatal!

If the present system of short courses of lectures be continued, the most imperative need of the present time is the establishment of distinct schools of clinical instruction, where, after completing their courses of didactic lectures, students shall be required to attend before presenting themselves for graduation. They should be admitted to these clinical schools only after what should be regarded as proper preparation, and should devote their time, without serious interruption by other studies, to the observation and study of cases—to hearing lectures upon them, reading the authorities respecting them, and watching their progress to convalescence or a fatal result; and, where possible, confirming or correcting the diagnosis by careful pathological inspections.

In the article upon preliminary education, in the plan presented by your Committee, the Greek and Latin languages are not particularly mentioned. While the Committee would by every proper means encourage the study of these languages, both as a means of general culture and as preparatory to the study of the profession,

they seriously doubt whether, in the present condition of our country and of enlightened opinion respecting the comparative value of classical and scientific, mathematical and practical learning, a knowledge of these languages should be insisted upon as positively essential. It should be borne in mind that several of the most respectable educational institutions of this country, as well as some abroad, have established what are called scientific courses of study, excluding the dead languages—these more modern and practical courses being regarded as affording an equal amount of culture with the classical; and students of such colleges thoroughly trained in mathematical, scientific, and practical knowledge, understanding two or more of the modern languages of Europe, should certainly not be excluded from our medical colleges because they are not acquainted with languages which have long since ceased to be spoken. It is true that most of the peculiar terms of medicine are derived from the Greek and Latin, and a knowledge of these languages is therefore useful and desirable; still, the technical meanings of these terms are often quite different from their etymological, and these exact meanings can only be learned by studying the subjects the words represent. For the young man of ambition and talents, commencing study preparatory to the profession comparatively late in life (as is the case with large numbers of our best medical students)—for such an one to spend several years in mastering these languages, or even several months in obtaining a mere smattering of them, is regarded by some reputed wise men as little better than a waste of time. At all events, however desirable a knowledge of these languages may be, that it should not be absolutely demanded as a thing essential, is the deliberate judgment of many among us. A good English education, however, including a knowledge of general literature and the art of composition, and including also respectable scientific attainments, is, and should be regarded as positively essential.

The Committee wish particularly to disclaim any intention to apologize—on the contrary, they repudiate any apology for ignorance or want of preliminary culture in those commencing the study of the profession. It is only the positive necessity—not the desirableness—of a particular kind of culture which is questioned. They see no impropriety in allowing, to those who prefer it, the substitution of cultivation in modern literature and science for that in the ancient classics.

Another topic allied to the education of physicians, and with a brief consideration of which this report will be concluded, is the *education of the people*, especially the more intelligent portions of them, *on subjects relating to our profession*. The Committee are aware that upon this subject there may be differences of opinion among us; but experience and reflection have convinced them that objections to the popularization of such knowledge are founded upon the remains of that ancient notion, now generally repudiated, which, applied to theological subjects, found expression in the sentiment that *ignorance is the mother of devotion*.

We are all aware of the fact that upon the subjects of life and organization, of health and disease, the scientific methods of prevention and the principles of cure—and especially upon the character and relations of the medical profession—the general community, embracing even literary men and the members of the other learned professions, if not profoundly ignorant, are possessed of the most crude and erroneous notions.

The opinion is held by not a few of the most enlightened men, both within and without our profession, "that one great reason why ignorant pretenders to skill in the healing art are so powerful, is because regular physicians hold themselves and their science so far from the common understanding." Certainly there is no profession respecting which the general community know so little, and respecting which, as a consequence, so many and so great practical errors prevail. As a result of this ignorance all men who pretend to cure disease stand, in public estimation, much upon the same platform. The idea is prevalent, even among otherwise intelligent men, that at the present time there are among us two great rival schools of medicine—the allopathic and homœopathic—entitled, perhaps, to equal consideration and equal support. These persons, though assuming to judge in the matter, have scarcely a notion of what homœopathy means, and are without the slightest conception that the term allopathy, as applied to regular physicians, is a slanderous epithet, used for a purpose, and which all of us repudiate, as we do or should those who persist in applying it.

An enlightened and distinguished gentleman,[1] not within our ranks, but whose position and studies have led him to give much attention to these subjects, has recently said: "I fear that it is the fault of the medical profession themselves that the great mass of

[1] E. O. Haven, D.D., LL.D., President of the University of Michigan.

the people, educated and uneducated, are left ignorant of these matters."

He proceeds in substance to say, that the labors of medical men for humanity, their discoveries in the prevention and cure of disease, are more or less covered in technical language, and are recorded in books and periodicals which are not read even by a majority of practising physicians, and by not enough out of the profession to produce any appreciable effect upon society. Theological books are almost forced upon the people. Politics and business compel all well-educated men to read some works on the science of government; and all of us have our political and religious newspapers; but how few outside of the medical profession read a genuine medical book, or subscribe for a first-class medical periodical! It is to be feared that physicians have encouraged this state of things; that they have held on too long to the dark-age theory of exclusiveness and of the maintenance of power by the ignorance of the people. The consequence is that many of the people have turned to inferior and even false guides.

In the old monarchies, whose genius is to maintain right by force, and where the privileges of physicians and the protection of the community are secured by rigid laws, physicians may stand aloof from the people, addressing themselves upon professional subjects exclusively to their class. But in this country, and at the present time, no profession can do its full work except on the principle of educating the people and appealing to them as umpires. They are the judges as to patronage and support—why not prepare them to judge? Here, there are no legal protections against stupidity and pretensions, and if they are conquered, it will be by the power of truth. "Where," exclaims this enthusiastic layman, expressing at the same time the sentiment of many others, "Where, then, is the popular medical periodical, having the sanction and authority of the American Medical Association, enlisting the best talent of the country, enlightening the people on physiology, hygiene, and kindred topics, presenting a condensed popular view of the progress of medical science and art, enlivened by biography and appropriate fiction and poetry, and commanding its hundreds of thousands of readers?"

Your Committee are of the opinion that this suggestion is worthy of the most serious consideration.

The attention of the public, particularly in England, and to some extent in this country, has been directed much of late to

various physiological and sanitary subjects; but much that has been written has failed of full and general appreciation, in consequence of ignorance of elementary scientific facts. This elementary knowledge should be supplied in the schools and colleges; for it is hardly a discovery yet to be made, though it is a truth not yet fully appreciated by educators, that the study of biological science affords as valuable mental discipline as that of mathematics or the languages, besides storing the mind with knowledge of the greatest practical value, bearing upon the very essentials of our existence.

Particularly in the higher departments of education should somewhat extended courses of instruction be given upon the laws of life. Says the same writer already referred to: "I believe that every theological school should have a thorough, systematic course of lectures on the body and the laws of physical life, given by a regular physician. No graduate into the ministry should hereafter be ignorant on this subject. So should it be also with our law schools. I believe that those fundamental truths of physiology, by the ignorance and abuse of which quackery obtains its power, should be explained in our schools to our young people."

Your reporter has had an opportunity of observing the effects of instruction of this kind to college students in their undergraduate course. They have manifested much interest in the subjects, and have not only received practical information respecting the preservation of health of body and mind, but have become rationally convinced of the utter absurdity of all exclusive systems of medicine, and of infinitesimal dilutions; their sympathies being deeply enlisted in the cause of scientific truths, as relating to subjects connected with our profession. Of an entire senior class of various previous predilections, there is scarcely, if indeed a single exception to this statement.

It may be objected to these general views of the popularization of some knowledge of medicine, that incomplete knowledge is worse than absolute ignorance, and that popular knowledge of medicine must necessarily be incomplete. This objection, if valid and applied as a principle, would close all institutions of learning, and plunge the world into the most profound mental darkness; for upon what great subject has even the most learned complete knowledge? It has been said that—

"A little learning is a dangerous thing;"

but this sentiment has been generally repudiated in more modern times; and, driven from every other place, is it to find its final and

eternal lodgment in medicine? True knowledge upon all proper subjects must be a good. It is false knowledge that does harm in medicine as in everything else. Increase of knowledge, it is true, increases responsibility, and may be turned to evil account, but it is safer and better than ignorance. Nothing is further from the truth than that correct though partial knowledge of medical subjects will induce persons to depend upon themselves, and not call for professional aid when ill. It is only presumption founded upon false knowledge which produces such results. True knowledge on these subjects will induce caution, and lead to the employment of the most skilful. What is the resort of physicians when they or their families are ill? Would other men, if informed, do differently?

But curiosity and interest demand some information on these subjects, and if the regular profession does not supply that demand, it will be met, as to a large extent it now is, by the half ignorant and dishonest, who have special systems to support, particular methods of pretended cure to recommend, or quack nostrums to sell.

Standing upon our professional dignity, aside from the passing throng, and trusting to the truth, hidden among us, we have allowed the most absurd system of quackery ever conceived of to obtain such a hold upon the minds of otherwise intelligent people as often to embarrass and annoy us; and although, following the example of the many systems which have preceded, it is rapidly changing its form, and will soon pass away, yet, while the public mind remains unenlightened on these subjects, it will be replaced by something else as successful, if not as absurd.

It is probable that vagaries in medicine as in politics, philosophy, morals, and religion, depending upon indefinable idiosyncrasies, giving some persons a tendency to seek for and embrace the marvellous and the incredible, will continue to exist; but if the general public mind be properly informed, their votaries will be few and insignificant, and such vagaries may then be allowed to pass with only a smile, as they will work their own corrections and be forgotten. This indeed must be the ultimate fate of all errors and follies. Our noble science will stand, based as it is upon the rock of truth and common sense, however popular ignorance and superstition may dash their waves around us; but it will never assume its proper rank among other sciences and professions; it will never extend its full benefits to all, until those who furnish

public opinion have been instructed in the laws of nature, have been taught to observe closely, and to distinguish between whims and facts. In an atmosphere of such general culture alone will the medical profession be properly esteemed. Then, on the principle of the division of labor, men will apply for aid to those whose special pursuits make them experts. On this plan alone, your Committee believe, can our profession in this country exert its legitimate power.

Is it not then a positive duty which the profession owes to itself as well as to others, to endeavor systematically and thoroughly to enlighten the public respecting its nature and its claims?

In conclusion, your Committee would most respectfully, but most urgently, commend to this Association, to the medical schools, and to the profession at large, the plan for the improvement of medical education suggested; believing it could be carried into effect with the most beneficial, and without injurious results, being progressive without being revolutionary, and adapted to our present state; and as a means of sustaining the profession in its efforts for improvement, and its labors for humanity, they would with equal earnestness urge the importance of educating the people respecting its character, its relations, its achievements, and its aims.

A. B. PALMER,
Chairman.

REPORT

OF THE

COMMITTEE ON MEDICAL LITERATURE.

REPORT OF THE COMMITTEE ON MEDICAL LITERATURE.

THE Chairman of the Committee for the purpose of reporting on the Medical Literature of the year 1867 would respectfully state that, with the objects of getting the requisite knowledge upon which to base a report, the following circular was issued and sent to all of the publishers of medical books and journals in the United States.

CIRCULAR.

CINCINNATI, June 5th, 1867.

The undersigned were appointed at the last Annual Meeting of the American Medical Association, held in Cincinnati, a Committee on *Medical Literature* for the current year. The duties of this Committee are defined in the following regulations of the Association :—

"The Committee on Medical Literature shall prepare an Annual Report on the general character of the periodical Medical Publications of the United States in reference to the more important articles, therein presented to the profession, on Original Medical Publications, on Medical Compilations and Compends by American writers, on Medical Reprints of Foreign Medical Works; and on all such measures as may be deemed advisable for encouraging a national literature of our own."

Being desirous of making as full a report as possible, the Committee desire that you shall forward to the Chairman a copy of all Medical Books, Pamphlets, Essays, Monographs, Periodicals, Reports, Lectures, Proceedings of Societies, etc., that may be issued by you, as early as convenient after publication, that they may be brought to the notice of the profession.

These favors will be advantageous to publishers, and will facilitate the objects had in view by the appointment of the Committee, and greatly oblige,

Yours, respectfully,

GEO. MENDENHALL, *Chairman.*
R. R. McILVAIN,
GEO. C. BLACKMAN,
E. WILLIAMS,
P. S. CONNOR.

This course was deemed proper, as it could not be supposed that the Committee would be able to purchase all the books published during the year, for the purpose of giving an abstract, review, or bibliographical notice of them. This circular was also published promptly by all of our medical journals, so far as known, and notice called to it by the editors in their usual obliging and courteous style. Not a single response has been made by any one of our

numerous publishing houses, although one small volume was sent by its author. The following journals were placed at the disposal of the Committee:—

The Southern Journal of the Medical Sciences.
The Chicago Medical Examiner.
The Buffalo Medical and Surgical Journal.
The Cincinnati Lancet and Observer.
The St. Louis Medical and Surgical Journal.
One number of the Humboldt Medical Archives.
One number of the New York Medical Journal.
A few numbers of the Leavenworth Medical Herald.
A portion of the Boston Medical and Surgical Journal.
A number of the Dental Register of Cincinnati.
Volume 8th of the Dental Cosmos of Philadelphia.
Report of the Metropolitan Board of Health of New York for 1867.

These constitute the sum total of medical literature furnished the Committee.

It is difficult to conceive that publishers, whose interest consists in disseminating widely a knowledge of medical publications, could so far exhibit the illiberality indicated. For several years past they have been liberally patronized. Many of them have amassed fortunes from the profession, and yet, when called upon by a Committee of this Association, representing the medical men of the United States, we have this beggarly response to the request for assistance in making up the Annual Report on the Medical Literature of 1867. The Committee has, therefore, been under the necessity of procuring the requisite information from such sources as came within its power. Under these circumstances, therefore, it can hardly be expected that a full report can be made. The catalogue of publications appended it is hoped may be found tolerably correct and complete, although unassisted by the publishers. Sufficient information has, however, been collected to show that the current year, covered by this report, has furnished an unusually large amount of medical publications, numbering, as nearly as can be ascertained, about two hundred, exclusive of medical journals, but including transactions of societies, reports, and miscellaneous matter, of domestic and foreign authorship. Much of it is evidently of an excellent quality, and well calculated to elevate the character and reputation of American medical literature. During the late war, authorship and publications were largely in the line of military medicine and surgery and sanitary science. But since this unhappy

conflict has ceased, a fresh impetus has been given to the cultivation of general professional knowledge. We are rapidly advancing towards the payment of our medical literary indebtedness to older countries, in spite of the absence of international copyright laws. The war will be an indirect means of accumulating a vast fund of knowledge in medicine, surgery, and sanitary science, that cannot be excelled in any country on the face of the globe. That this information, thus accumulated, will be elaborated and presented to the profession in a valuable shape by the Medical Department of the War Office and Sanitary Commission, we cannot doubt, from the publications already made and the character of the men engaged in it. The foundation is being laid for an enduring monument to the patriotism, professional acquirements, and faithfulness of the medical portion of the army service, both in the issue of books and in the preparation of the wonderfully extensive museum at the capital of the country, unequalled probably in the world.

Our periodical medical literature is not deficient in quantity, while the quality of much of it, we believe, is undergoing steady improvement.

During the war, several journals were forced to yield to the pressure of high prices for their production and diminished patronage. But this class of literature, which furnishes the pabulum for much that is of a permanent character, is rising, phœnix-like, from its depression.

After the numerous reports so ably made by preceding committees, it is hardly possible to add much at the present time, without, in a great measure, again travelling over the ground previously occupied, in regard to measures deemed advisable for encouraging a national medical literature of our own. We may say, however, that these measures, to be efficient, must come from the profession itself; no external aid from legislation need be looked for, even if desirable. Improvement must begin, in the first place, by a proper selection and encouragement of young men of good capacity to enter the profession, and who have had proper training in early life, by which their capability can be wrought up to its greatest degree of efficiency in the cultivation of intellectual pursuits. Office training, under able and judicious preceptors, or in preparatory medical schools, both of which are now too much overlooked, ought to do much towards initiating the medical student into the profession, imbued fully with a lofty sense of its importance, and the wide field afforded for its cultivation and

improvement. Much can be done also by public teachers in our chartered medical schools in inspiring young men who listen to them with an enthusiastic desire to cultivate what is known in medicine, and to extend their researches into new fields of observation and experiment. Sound medical ethics should also form a prominent part of this early training to students, so that, while imbibing medical knowledge, they may at the same time absorb that which is no less important—correct principles, which shall govern them in their relations to fellow-members of the profession they are about to enter. Correct ethical training may have an important bearing on the reliability for truthfulness of our medical literature.

Medical societies properly conducted tend to stimulate physicians in an agreeable and profitable manner in adding to the stock of professional knowledge. Essays written for the consideration of, and to be criticized by fellow-members of societies, are more apt to be carefully prepared and elaborated, than when not thus exposed to criticism. The discussions also often elicit facts of no small importance. The active working condition of the profession can be judged of very correctly in any locality by the state of vigor of its medical societies.

Offering prizes for valuable essays is well calculated to stimulate individuals in the line of original observations, careful thought, and accuracy in recording what they may have to communicate. Some valuable papers have from time to time been produced in this way by this and other associations.

Introductory lectures in medical colleges are generally rather popular in character, and do not usually add much of value to our medical literature, although occasionally the reverse is the case. The formation of library associations by which for a moderate sum of money access can be had to a large amount of periodical and other literature, is well calculated to stimulate to the acquirement of information. This increase of knowledge improves the capacity to communicate, stimulates to greater industry, and many are induced to write acceptably who would otherwise never have thought of adding to the common stock through the medium of the press.

Our medical journals, however, afford the greatest facilities and stimuli in the improvement of our medical literature. They are originated and sustained, it is true, in different cases from different motives and interests.

Very few of them pay a pecuniary profit to those who publish them; but motives of professional pride, ambition, and interest stimulate their projectors to bring them into existence and make them as acceptable to the profession as possible. It has been urged that we have too many journals; that, if the best patronage and talent now bestowed on them were concentrated on a few, so as to give a more permanent support to a smaller number, it would be better. This we believe to be an error. Few physicians write from motives of pecuniary gain; nearly all do so for professional advancement. This is the essential stimulus, and many are encouraged to contribute to a journal near home, who would not venture to offer their productions to those more remote. Their first productions are expected to be subject to milder criticism, and from small and timid beginnings writers gradually gain confidence in themselves, until in many cases they acquire the strength to make valuable contributions. Were it not for these facilities and kind encouragements near home, they would have remained silent. But it is said that much thus written is of no value, and had better never been printed. This may be true, but those articles that are valueless are not likely to do any harm, while if a few grains of gold can be gathered from the mass of material that otherwise would have lain dormant, we claim an advance has been made. Free competition and an invitation to the mass of the profession to contribute are more likely in the course of things to result in good, than too much restriction of the quantity of contributions to our journals. Free thought and free writing, with the power of readers to reject the bad and treasure up the good, even should the valueless exceed the valuable, is our true policy. This view, however, is not intended as an apology for the publication of articles that are not the result of honest and truthful investigations.

Medical journals constitute the pioneer corps of our literature; they accomplish much that is not immediately productive of profit, and yet valuable in its results. The sappers, miners, and pioneers of a new country are no less necessary to opening the fertile hills and valleys to the progress of civilization than are the journals in their influence on more permanent and valuable literature. The sterling portions are selected and preserved by the makers of books, while the worthless portions are ephemeral and sink into oblivion.

All our best authors commenced their training by writing for

the periodicals, and in this way became fitted for more elaborate composition; they did not emerge from obscurity full-fledged, and of mature growth.

When we consider the manner of occupation of a physician's time, particularly in this country, it is wonderful that there is so much written and so well written as it is. We are a new people; immaturity is necessarily characteristic of most of our productions. While we excel in many things, and men of talent arise among us in every department of life, towering to an equality and even surpassing those of older countries, we must admit that the average standard is rather below the most of them. The mass of physicians while not destitute are struggling for a comfortable subsistence for themselves and rising families; exceptions occur in our older cities, but this is the condition of the majority. The time of members of the profession is therefore largely absorbed in obtaining a livelihood; and this interferes greatly with literary pursuits. The irregularities, and liability to frequent interruptions incident to the nature of our duties, and different from the circumstances surrounding every other profession, are unfavorable to deliberate observation, thought, and writing. Short intervals of devotion to a subject must necessarily prevent connectedness, clearness, and force in communicating ideas. The heavy pressure on the mind of the physician under the responsibility of cases of dangerous illness, to which are often added the importunities and unreasonable criticisms of anxious friends, is also a circumstance badly calculated to favor careful study, or excellence in composition. On the other hand, the every-day training and occupation of lawyers and theologians accord with their improvement and perfection in expressing themselves with elegance, perspicuity, and ease.

These are some of the obstructions in the way of rapid advancement towards completeness in the medical literature of this country.

Notwithstanding these difficulties, we may well congratulate ourselves on the position of American medical authorship. Within the last few years books on almost every department of medical science have made their appearance which challenge competition with works issued from the European press. Publishers are not, as formerly, afraid to publish the writings of American authors; and the reasons simply are that they are in demand and it pays. The year 1868, which will belong to the next year's report, has thus far exhibited a gratifying increase in the publication of valuable books by both foreign and domestic authors. This fact looks well

for the reading disposition of the profession, and is in striking contrast with the demands at the time this Association was formed. Can we not safely claim a large share in producing this favorable change in the professional appetite for medical knowledge?

Without being able to give an extended notice of the new publications, it may not be amiss to glance at a few of them.

MEDICAL TREATISES.

Wood's Practice of Medicine.

The sixth edition of this work has made its appearance, and it now ranks among the most complete and classical works of the kind in our own or any other language, and needs no extended notice in this place. Its accomplished author has been blessed with health and strength to revise each successive edition, and it is hoped this may be the case for many years to come.

Treatise on the Principles and Practice of Medicine. By AUSTIN FLINT, M. D., etc.

This work has reached the second edition, although less than one year has elapsed since the first was offered to the profession. This fact is no doubt a correct indication of the estimate placed upon it by practitioners and students of medicine, for whom the work is intended. About one hundred pages of new matter have been added, and the other portions revised.

Essentials of the Principles and Practice of Medicine. By HENRY HARTSHORNE, M. D.

This book is a carefully prepared *résumé* of the practice of medicine as now recognized by our best practitioners. As a manual, it is superior to most books of this kind, and will, no doubt, form the basis of a more extended treatise at some future time by a highly qualified member of the profession.

Epidemic Meningitis, or Cerebro-Spinal Meningitis. By Prof. STILLÉ.

This treatise is the product of extended clinical observations on the disease under consideration. A large number of authors have also been consulted, and the result is a condensed view of the subject in a masterly manner. The history, anatomical characters, causes, prognosis, diagnosis, and nature of the disease, with its

treatment, are systematically set forth. As a monograph it may be considered as one of the most complete, and does credit to American medical literature.

Surgical Observation, with Cases and Operations. By J. MASON WARREN, M. D.

This is a production of six hundred and thirty-one pages, which "contains some results of surgical experience," as modestly stated by the author. No correct impression of it can be produced by a critical notice; to be appreciated it must be read and studied. The book contains fourteen chapters, with six plates, and thirteen wood-cuts; and the details of three hundred and seventy-three cases. The history is highly illustrative in practical matters, and almost every operation in surgery is treated of in a masterly manner. It must inevitably add not only to the reputation of the author himself, but lustre to American authorship. The mechanical execution is good. The death of the author is a national loss to the profession.

Injuries of the Spine, with an Analysis of nearly Four Hundred Cases. By JOHN ASHHURST, Jr., M. D.

Dr. Ashhurst has, with great labor and research, within the compass of one hundred and twenty-seven pages, collected accounts of three hundred and ninety-four cases of fracture and luxation of the spine, from which he has been enabled to draw much valuable information in reference to this class of injuries, which are acknowledged by all surgeons to be involved in much obscurity.

It is a work of great value to the surgeon.

Notes on Fractures of the Upper Extremities. By JOHN H. PACKARD, M. D. Pp. 58.

This pamphlet contains the substance of a series of lectures delivered in April, 1866, under the "Mütter Lectureship," and contains many valuable points.

Ununited Fractures successfully treated, with Remarks on the Operation. By HENRY J. BIGELOW, M. D.

This pamphlet of twenty-five pages gives an account of a new treatment in eleven cases of ununited fracture, the results of which were sufficiently encouraging to warrant surgeons in adopting it.

A Report on Amputation of the Hip-Joint in Military Surgery. By G. A. OTIS, M. D., and PAUL F. EVE, M. D. Included in Circular No. 7 of the War Department.

This report contains an exhaustive account in reference to this operation, formed principally upon the experience in the late war.

The Practice of Medicine and Surgery applied to the Diseases and Accidents incident to Women. By WM. H. BYFORD, A. M., M. D. Pp. 616.

This is the second edition of a book which has received the approbation of the profession. It has been carefully revised, and ranks as one of the best works on this subject. Its success has been all that could be desired by the author.

Obstetrics: the Science and the Art. By CHAS. D. MEIGS, M. D., etc. Pp. 760.

This is the fifth edition of Dr. Meigs' book on Obstetrics, revised by the author. With all of his peculiarities of style and opinions, it retains its popularity, and may be considered as among the best works we have on the subject.

Obstetric Clinic. By GEO. T. ELLIOTT, Jr., M. D., etc.

Dr. Elliott has thrown together the results of his experience in Bellevue Hospital, in a volume of 458 pages, during a service of fourteen years, and the work is "presented as a partial discharge of the debt due the profession by all who enjoy hospital advantages."

The volume consists of a detail of cases, and the practice pursued, with remarks applicable to the varied conditions. We welcome this work as the forerunner of like reports from other teachers who may enjoy similar opportunities.

The Physiology of Man: Alimentation; Digestion; Absorption; Lymph, and Chyle. By AUSTIN FLINT, Jr., M. D.

This is the second of the series, and treats of the above subjects. The work will be completed in four parts. It promises, judging from the first and second volumes, to be very complete—the most so of any work on physiology which has yet appeared in this country.

A Treatise on Human Physiology. By JOHN C. DALTON, M. D. Pp. 695.

This admirable work has reached the fourth edition in eight years, which may be considered as the best test of the estimate of it by the profession.

Studies in Pathology and Therapeutics. By SAMUEL HENRY DICKSON, M. D., etc. Pp. 201.

This is quite a readable and instructive book.

A Treatise on Therapeutics and Pharmacology, or Materia Medica. By GEORGE B. WOOD, M. D., etc.

This is the second edition of a work in two volumes, containing 1820 pages, which sustains the reputation of its author, whose ability is too well known to require any comment. It has undergone a thorough revision, and much new matter added, so as to bring it up to the present state of the science.

Synopsis of the Course of Lectures on Materia Medica and Pharmacy, delivered in the University of Pennsylvania; with Five Lectures on the Modus Operandi of Medicines. By JOSEPH CARSON, M. D. Fourth edition.

The synopsis of Professor Carson contains 272 pages. The five lectures added to this edition, on the mode of operation of medicines, is a great addition to the volume. The subject is discussed in a full and exhaustive manner, founded upon what is known in the present condition of our knowledge on the subject.

Micro-Chemistry of Poisons, including their Physiological, Pathological, and Legal Relations: adapted to the Use of the Medical Jurist, Physician, and General Chemist. By THEO. G. WORMLEY, M. D. Pp. 668.

We are indebted to Prof. Wormley for one of the most notable and praiseworthy books that have appeared in this country. The portion which consists of compilation alone does great credit to the author, and is the result of much labor. But a large portion of it is the result of accurate and well-directed experimental investigation, which cannot be found in any other work, serving to elucidate correctly a most difficult subject. Chemistry and microscopy have been applied by him with the greatest skill and perseverance in rendering his work as complete as possible. His illustrations, seventy-eight in number, are "drawn from nature, and transferred to steel," by his wife, to whom the book is dedicated, and are done in a style entirely satisfactory. In this volume, we have a standard work, unsurpassed in this or any other country; and it must remain as a monument to the patience and skill of the author. It will be indispensable to the "Medical Jurist, Physician, and General Chemist, for whom it is intended."

Modern Inquiries: Classical, Professional, and Miscellaneous. By JACOB BIGELOW, M. D.

This book consists of three hundred and seventy pages, mostly reprints of productions which have appeared at different times on professional, educational, and political topics.

The Principles and Practice of Disinfection. By ROBERTS BARTHOLOW, M. D.

A volume of over one hundred pages, containing many valuable ideas on disinfection.

MEDICAL JOURNALS.

In this notice it will be impossible even to enumerate the original articles published in the different medical periodicals of the country.

The American Journal of the Medical Sciences.

For nearly half a century this periodical, under the editorial management of ISAAC HAYS, M. D., has held its reputation as the leading journal of America. Its arrangement and style have been uniform from the beginning to the present time. On looking over the list of contributors in its early days, we discover the names of nearly all of the prominent members of the profession at that time, and many of whom rank as shining lights in every country where medical science flourishes.

While it can claim to be the oldest journal on this side of the Atlantic, the volumes issued in 1867 exhibit all of the freshness and vigor of youth. Many other journals of great merit have grown up and attracted to them talent of the first order, yet we find no deficiency in quantity and quality of matter in its pages. The growth of our country has been sufficient to provide medical food for more than a score of others which are conducted with ability not inferior to the parent journal.

The two volumes of the American Journal of the Medical Sciences for the year 1867 contain nearly five hundred pages of "original communications." This is independent of transactions of societies, reviews, and bibliographical notices.

Southern Journal of the Medical Sciences. Published quarterly, in New Orleans. Edited by Drs. S. M. BEMISS and W. S. MITCHELL.

This is the title of a very spirited and well-conducted periodical edited by D. WARREN BRICKELL, M. D., C. BEARD, M. D., W. S.

MITCHELL, M. D., and JOSEPH HOLT, M. D., and assisted by D. P. TANNER, M. D., and A. N. PERRY, M. D., which was continued to the seventh number, and then consolidated with the New Orleans Medical and Surgical Journal, under the name of "The New Orleans Journal of Medicine," the first number of which was issued January, 1868. This journal contained during the year three hundred and sixty-four pages of "original communications." Its successor, from the two numbers issued, promises to sustain fully the reputation of its predecessors.

The Chicago Medical Examiner for 1867. Edited by N. S. DAVIS, M. D.

This journal is in the eighth year of its existence. The widely known reputation of the editor is well sustained in it. It contains about five hundred pages of original matter, including reviews, correspondence, etc. It is published monthly.

The Lancet and Observer of Cincinnati.

This is a monthly journal, and is the result of a consolidation of the Western Lancet and Cincinnati Observer. The former of these journals was commenced in 1842 by Dr. L. M. Lawson. Drs. Lawson, Harrison, Mendenhall, Wood, and Blackman were connected with the editorial department prior to its present union. The Observer originated in 1856, and was edited by Drs. Stevens, Murphy, and Mendenhall. Ten years ago the two journals were consolidated, and the name of each retained in the title. Since this time Drs. Stevens, Murphy, Mendenhall, Mussey, and Williams have officiated as editors at different times. Drs. Stevens, Murphy, Mussey, and Williams are the present editors, the former having the principal charge and management. This journal contains nearly six hundred pages of original matter for 1867, including reports of hospitals, reviews, correspondence, etc. It has been regularly published for over a quarter of a century, and is, we believe, the oldest medical periodical in this country except the American Journal of Medical Sciences and the Boston Medical and Surgical Journal. It is well patronized, and presents as much or greater vigor than it has at any period of its existence.

The Boston Medical and Surgical Journal.

This is published weekly, and is the oldest in this country except the American Journal of Medical Sciences. Its publication was com-

menced in 1828 by Drs. Jno. C. Warren, Walter Channing, and John Ware. The same gentlemen edited and published the New England Quarterly as early as 1812, and which was continued until 1828. A consolidation was at this time effected between it and the Boston Medical Intelligencer, under the above title, and has continued to the present time. This journal has always been a favorite one in New England, and its pages present the best medical history that can be obtained of that portion of the Union. The present editors are Drs. David W. Cheever and Oliver F. Wadsworth, who evidently intend that its past reputation shall not only be preserved, but that its usefulness and vigor shall be increased in the new series just commenced. It is made up mostly of short articles, the greater portion of which are original, running through original communications, hospital reports, reports of medical societies, bibliographical notices, etc. It may be considered as a well-conducted, live medical newspaper.

The Buffalo Medical and Surgical Journal. Edited by JULIUS F. MINER, M. D.

This is published monthly, and has reached its seventh volume. It is the organ in which the Buffalo Medical Association publishes its proceedings, and these transactions form no inconsiderable part of its pages. It is mostly filled with original matter of a fair, average quality.

The Western Journal of Medicine (formerly the Cincinnati Journal of Medicine). Edited by THEOPHILUS PARVIN, M. D., Indianapolis.

This monthly completed its second volume during the year 1867. It is very largely composed of original matter. Its production seems to be a labor of love with its accomplished editor, judging from the amount of care bestowed upon it.

The Leavenworth Medical Herald. Edited by C. A. LOGAN, M. D., and T. SINKS, M. D.

The first number of this monthly was issued in June, 1867. This is the first medical journal, so far as we know, that has been issued in the new and flourishing State of Kansas. It is very creditably gotten up, and compares favorably with the medical periodicals of older cities both in matter and style.

New York Medical Journal. Edited by W. A. HAMMOND, M. D., and E. S. DUNSTEN, M. D.

This monthly was commenced in 1865, and is a credit to American medical journalism.

The Medical Record of New York. Edited by GEO. F. SHRADY, M.D.

This is a semi-monthly journal of medicine and surgery, and has just completed the second year of its existence. Each number contains twenty-four pages. It is made up largely of original matter, consisting of original communications, lectures, clinics, reviews, and notices, reports of societies, correspondence, editorials, medical news, etc. etc. It is creditably edited, and by being confined mostly to short articles presents quite a diversity of knowledge relating to medical matters.

The Richmond Medical Journal. Edited by E. S. GAILLARD, M.D.

This journal is issued monthly. Each number contains ninety-six pages. It is creditably gotten up both in style and matter, and is a gratifying evidence of a return to the prosperity of former days among our Southern medical friends.

The St. Louis Medical Reporter, a Semi-monthly Record of Medicine and Surgery. Edited by J. S. B. ALLEYNE, M. D., and O. F. POTTER, M. D.

Each number contains thirty-six pages. It has reached its second volume.

The Humboldt Medical Archives. Edited by A. HAMMER, M. D., M. A. PALLEN, M. D., and H. WHITEHILL, M. D.

A monthly journal of sixty-four pages, published in St. Louis. The first number made its appearance in September, 1867. Drs. Hammer and Pallen both make liberal and valuable contributions to its pages, and are evidently working editors.

Iowa Medical Journal. Edited by J. C. HUGHES, M. D.

Bi-monthly; each number contains thirty-two pages. It completed its fourth volume several years since, and suspended publication. In November, 1867, it was resumed, but from the prospectus of the second and third numbers we infer that it does not meet with the encouragement which ought to be given to a medical journal in the flourishing State of Iowa.

Pacific Medical and Surgical Journal. Edited by HENRY GIBBONS, M. D., and HENRY GIBBONS, Jr., M. D.

Each number contains forty-eight pages. It reached the seventh number of the first volume in December, 1867. It is, we believe, the only representatve in the line of medical journalism on the western side of the continent.

The Detroit Review of Medicine and Pharmacy. Edited by G. P. ANDREWS, M. D., E. W. JENKS, M. D., THEO. A. MCGRAW, M. D., and H. O. WALKER, M. D.

This has completed its second volume, and entered on the third. Published monthly, and each number contains fifty-six pages of reading matter.

The Atlanta Medical and Surgical Journal.

This has completed its eighth volume. Previous to the war six volumes were issued, when it was suspended. In 1866, it was resumed, and has now issued the second volume since its resumption. It is gratifying to find the profession in the South making laudable efforts to resume the publication of medical journals which were suspended during the war. We wish them success in their undertaking.

Nashville Journal of Medicine and Surgery. Edited by W. K. BOWLING, M. D.

Published monthly, each number containing forty-eight pages. It is now in the third volume of a new series. This journal was first established in 1851, under the editorial management of its present editor, W. K. Bowling, M. D.; afterwards Paul F. Eve, M. D., was associated with him. It was discontinued during the war, and revived in July, 1866. It is now under the sole management of its first editor. It was the first journal established in the State of Tennessee, and is now the only one. It is well patronized, and is a worthy representative of the medical men in that region of country.

Medical and Surgical Reporter. Edited by S. W. BUTLER, M. D., and D. G. BRINTON, M. D.

A weekly journal published in Philadelphia, and has just completed its seventeenth volume. Each number contains twenty-two pages, made up mostly of original matter. It is a medical news-

paper well adapted to the wants of the profession, containing much new and valuable material. The articles are generally brief and to the point, and therefore the journal contains a great variety of information adapted to the wants of the medical practitioner.

The St. Louis Medical and Surgical Journal. Edited by M. L. LINTON, M. D., and G. BAUMGARTEN, M. D.

Published bi-monthly. Each number contains ninety-six pages. Volume fourth, new series, was published during the year 1867. It is largely made up of original matter, and is a well-conducted journal.

The American Journal of Pharmacy. Edited by WILLIAM PROCTER, Jr.

This has reached its fortieth volume. It is published bi-monthly in Philadelphia, and each number contains ninety-six pages. It is a journal of authority in its department, and is indispensable to all druggists who wish to keep up with their profession. We might say the same of practitioners of medicine. A knowledge of pharmacy is too much neglected by physicians generally.

The Quarterly Journal of Psychological Medicine and Medical Jurisprudence. Edited by WM. A. HAMMOND, M. D.

This is published in New York, and has completed its first volume and entered on the second under favorable auspices. It occupies a special department of medicine of great interest to the profession.

American Journal of Insanity.

This is issued quarterly from the State Lunatic Asylum of Utica, N. Y., and has reached the twenty-fourth volume. Each number contains about one hundred and twenty pages, and the journal is a valuable acquisition to American medical literature.

The Dental Cosmos: A Monthly Record of Dental Science. Edited by J. H. MCQUILLEN, D. D. S., and GEO. J. ZIEGLER, M. D.

Published in Philadelphia. The volume for 1867, which was sent to the Committee, contains 680 pages. It has a very respectable list of contributors in the medical profession proper, as well as in the dental. It is very creditable to that branch of our profession to which it is particularly devoted.

The Dental Register of Cincinnati. Edited by J. TOFT and G. WATT.

This is a monthly of forty-four pages, and is devoted to the interests of dentistry generally. It is well gotten up, and we believe is highly appreciated by western dentists, and has quite a respectable list of contributors.

GEO. MENDENHALL, M.D., *Chairman.*

There are a few other medical journals that have not come under the notice of the Committee. On taking a general review of the medical literature as published in the journals of this country, we do not find any deficiency in regard to quantity. In fact this seems to be on the increase. The restless, active, and enterprising spirit of this country seems to be productive of a large amount of original articles. Many of them are written in a crude and imperfect manner, and contain little of value; while on the other hand, a large amount of what has appeared may be looked upon as creditable to the profession. The result, on the whole, is an advance in our knowledge on medical subjects, although our space does not permit us to notice particular articles.

A very considerable amount of original material is also furnished by medical societies, as published in their Transactions. We may allude briefly to the Transactions of the Medical Society of the State of New York, which was sent to the Committee, containing nearly six hundred pages, and forty-two original articles; one of which is a prize essay on Medical and Vital Statistics, very creditable to its author, Franklin B. Hough, M. D., of Louisville, N. Y.

Since the first of January of the present year, a very large number of books have been published, which more properly come under the notice of the reporter on the medical literature of 1868; and will not therefore be noticed in this report.

List of Medical Books Published in the United States from January 1st, 1867, *to January* 1*st,* 1868.

THEORY AND PRACTICE OF MEDICINE, ETC.

A Treatise on the Practice of Medicine. By George B. Wood, M. D., LL. D. Sixth edition, 2 vols. 8vo., pp. 1002, 982.

Prevention and Cure of Consumption by the Swedish Movement Cure. By David Wark, M. D. 12mo., pp. 56. New York: S. R. Wells.

Infantile Paralysis and its Attendant Deformities. By Charles Fayette Taylor, M. D., etc. 16mo., pp. 119. Philadelphia: J. B. Lippincott & Co.

The Indigestions, or Diseases of the Digestive Organs Functionally Treated. By Thomas King Chambers. 8vo., pp. 287. Philadelphia: H. C. Lea.

Lectures on Clinical Medicine. By A. Trousseau. Translated and edited with Notes and Appendices, by P. C. Bazin, M. D. Part 2, 8vo., pp. 277 to 512. Philadelphia: Lindsay & Blakiston.

Chronic Diseases of the Larynx, with Special Reference to Laryngoscopic Diagnosis and Local Therapeutics. By Dr. A. Tobold. Translated from the German by G. M. Beard, M. D. Illustrated. 8vo., pp. xvii., 279. New York: William Wood & Co.

The Family Physician and Household Companion, being a Treatise in Plain Language on the Art of Preserving Health and Prolonging Life. A Description of all Diseases with the most approved Treatment. (!!!) For the Use of Families. By M. L. Byrn, M. D. Illustrated. 8vo., pp. 337. New York.

A Treatise on the Principles and Practice of Medicine, designed for the Use of Practitioners and Students of Medicine. By Austin Flint, M. D. Second edition, revised and enlarged. 8vo., pp. 967. Philadelphia: H. C. Lea.

Report of the Committee on "Spotted Fever, so called." By James J. Levick, M. D.

Publications of the Massachusetts Medical Society. Vol. II., No. 1.

The Science and Practice of Medicine. By William Aitken, M. D. From the fourth London edition, with additions by Meredith Clymer, M. D., etc. etc. 2 vols. 8vo., pp. 955, 1114. Philadelphia: Lindsay & Blakiston.

Watson's Lectures, Abridged. By J. J. Meylor, A. M., M. D., Philadelphia.

Essentials of the Principles and Practice of Medicine. A Handy Book for Students and Practitioners. By Henry Hartshorne, M. D., etc. etc. Large 12mo., pp. 417. Philadelphia: H. C. Lea.

Clinical Lectures on the Principles and Practice of Medicine. By John Hughes Bennett, M. D., etc. etc. Fifth American, from the fourth London edition, with 537 illustrations on wood. New York: William Wood & Co.

A Biennial Retrospect of Medicine and Surgery, and their allied Sciences. Edited by Mr. H. Power, Dr. Anstie, Mr. Holmes, Mr. Thomas Windsor. Dr. Barnes, and Dr. C. Hilton Fagge for the New Sydenham Society. Philadelphia: Lindsay & Blakiston.

Notes on the Origin, Nature, Prevention, and Treatment of Asiatic Cholera. By John C. Peters, M. D. Second edition, with an Appendix. New York: D. Van Nostrand.

Spotted or Congestive Fever. By C. B. Coventry, M. D., of Utica, N. Y. Albany, 1867.

Photographs of Diseases of the Skin, taken from Life, under the superintendence of Howard F. Damon, A. M., M. D., Fellow of Mass. Med. Soc., etc. Series I. Nos. 1, 2, 3, 4. Boston: James Campbell, 1867.

The Principles and Practice of Laryngoscopy and Rhinoscopy in Disease of the Throat and Nasal Passages. Designed for the use of Physicians and Students, with 59 engravings on wood. By Antoine Ruppaner, M. D., M. A., Memb. Am. Med. Assoc.; of Mass. Med. Soc., etc. New York: A. Simpson & Co., 1868.

Epidemic Meningitis, or Cerebro-Spinal Meningitis. By Alfred Stillé, M. D., Prof. of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania, etc. etc. Philadelphia: Lindsay & Blakiston, 1867.

On Diseases of the Lungs and Air-Passages: their Pathology, Physical Diagnosis, Symptoms, and Treatment. By Henry William Fuller, M. D., Cantab., F. R. C. P. Lond.; Physician to St. George's Hospital, etc. etc. From the second and revised London edition. Philadelphia: Henry C. Lea, 1867.

An Index of Diseases and their Treatment. By Thomas H. Tanner, M. D., F. L. S. 8vo., pp. 397. Philadelphia: Lindsay & Blakiston.

SURGERY.

Practical Treatise on Shock, after Surgical Operations and Injuries: with especial reference to Shock caused by Railway Accidents. By E. Morris, M. D. 16mo., pp. 89. Philadelphia: J. B. Lippincott & Co.

Surgical Observations, with Cases and Operations. By J. Mason Warren, M. D. Illustrated. 8vo., pp. xiv., 630. Boston: Ticknor & Fields.

Plastics: A New Classification and a Brief Exposition of Plastic Surgery. A reprint from the Report in the Transactions of the Illinois Medical Society for 1867. By D. Prince, M. D. 8vo., pp. 96. Philadelphia: Lindsay & Blakiston.

Injuries of the Spine: With an Analysis of nearly Four Hundred Cases. By John Ashhurst, Jr., M. D. 12mo., pp. 127. Philadelphia: J. B. Lippincott & Co.

Conservative Surgery. By Henry Y. Davis, M. D. New York: D. Appleton & Co.

Contributions to the Pathology, Diagnosis, and Treatment of Diseases of the Spine. By Benjamin Lee, M. D. Philadelphia: J. B. Lippincott & Co.

Case of Destruction of the Body of the Lower Jaw: Reparative Autoplastic Operation. By Gurdon Buck, M. D.

Two Cases Œsophagotomy for the Removal of Foreign Bodies: with a History of the Operation. By David W. Cheever, M. D. Boston: David Clapp & Son.

Notes on Fracture of the Upper Extremity. By John H. Packard, M. D. Philadelphia.

Treatment of Fractures of the Lower Extremity by the Use of the Anterior Suspensory Apparatus. By N. R. Smith, M. D. Baltimore: Kelly & Piet.

Recto-Vaginal and Recto-Labial Fistula: A New Method of Operating for. By Isaac E. Taylor, M.D.

Ununited Fracture Successfully Treated: with Remarks on the Operation. By Henry J. Bigelow, M. D.

Observations on the Nature and Treatment of Polypus of the Ear. By E. H. Clarke, M. D., Professor of Materia Medica in Harvard University, etc. Boston: Ticknor & Fields, 1867.

On Railway and other Injuries of the Nervous System. By John Eric Erichsen, F. R. C. S., Professor of Surgery and Clinical Surgery in University College. Philadelphia: H. C. Lea.

Injuries of the Eye, Orbit and Eyelids: their Immediate and Remote Effects. By George Lawson, F. R. C. S., etc. With numerous illustrations. Philadelphia: H. C. Lea.

Perineal Urethrotomy: Relation of a Case suggestive of Remarks on the Treatment of Stricture of the Urethra. By Wm. R. Whitehead, M. D., etc. New York.

A Contribution to the History of Hip-Joint Operations performed during the late Civil War: being the statistics of twenty Cases of Amputation and Thirteen Resections at this Articulation, in the Southern Service. By Paul F. Eve, M. D. 8vo., pp. 17.

Mechanical Therapeutics: A Practical Treatise on Surgical Apparatus, Appliances, and Elementary Operations, embracing Bandaging, Minor Surgery, Orthopraxy, and the Treatment of Fractures and Dislocations. By Philip S. Wales, M. D., Surgeon U. S. N. With 642 illustrations. Philadelphia: Henry C. Lea, 1867.

OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

The Practice of Medicine and Surgery, applied to the Diseases and Accidents incident to Women. By W. H. Byford, M. D., etc. Second edition, enlarged. 8vo., pp. 616. Philadelphia: Lindsay & Blakiston.

Obstetrics: the Science and the Art. By Charles D. Meigs, M. D. Fifth edition, revised. One hundred and thirty illustrations. 8vo., pp. 760. Philadelphia: H. C. Lea.

Obstetric Clinic: A Practical Contribution to the Study of Obstetrics and the Diseases of Women and Children. By G. T. Elliott, M. D. 8vo. New York: Appleton & Co.

Hysteria: Remote Causes of Diseases in General; Treatment of Diseases by Tonic Agency; Local or Surgical Forms of Hysteria, etc. By F. C. Skey. 12mo., pp. 103. New York: Moorhead, Simpson & Bond.

An Essay on the Ligation and Management of the Umbilical Cord at Childbirth. By A. F. A. King, M. D., Member of the Clinico-Pathological Society of D. C., and of the American Medical Association. Washington, 1867.

On the Signs and Diseases of Pregnancy. By Thomas H. Tanner, M. D., F. L. S., etc. From the second and enlarged London edition, with four colored plates and illustrations on wood. 1 vol. 8vo. Philadelphia: Henry C. Lea, 1868.

A Practical Treatise on the Diseases of Children. By D. Francis Condie, M. D., Fellow of the College of Physicians, Member of American Philosophical Society, etc. Sixth edition, revised and enlarged. Philadelphia: Henry C. Lea, 1868.

Lectures on Diseases of Women. By Charles West, M. D., F. R. C. P., Examiner in Midwifery at University of London, Physician to Hospital for Sick Children, etc. Third American from the third and revised English edition. Philadelphia: Henry C. Lea, 1867.

PHYSIOLOGY.

The Physiology of Man: Designed to represent the Existing State of Physiological Science, as Applied to the Functions of the Human Body: Alimentation, Digestion, Absorption, Lymph, and Chyle. By A. Flint, Jr., M. D. 8vo., pp. 566. New York: D. Appleton & Co.

Physiology and Pathology of the Mind. By Henry Maudsley, M.D. 8vo., pp. xiv., 442. New York: D. Appleton & Co.

The Principles of Biology. By Herbert Spencer. Volume first. New York: D. Appleton & Co.

A Treatise on Human Physiology: Designed for the Use of Students and Practitioners of Medicine. By John C. Dalton, M. D. Fourth edition, revised and enlarged, with two hundred and seventy-four illustrations. 8vo., pp. 625. Philadelphia: Henry C. Lea.

MATERIA MEDICA AND THERAPEUTICS.

Studies in Pathology and Therapeutics. By S. H. Dickson, M. D., etc. 12mo., pp. 201. New York: William Wood & Co.

Digitaline: its Chemical, Physiological, and Therapeutic Action. A Prize Essay. By S. R. Percy, M. D. Extracted from the Transactions of the American Medical Association. 8vo., pp. 30.

Inhalations in the Treatment of Disease of the Respiratory Passages, particularly as Affected by the Use of Atomized Fluids. By J. M. Da Costa. Illustrated. 16mo., pp. 86. Philadelphia: J. B. Lippincott & Co.

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Annual Report of the Trustees and Superintendent of the Wisconsin State Hospital for the Insane, for 1866.

Eighteenth Annual Report of the Commissioner, Superintendent, and Steward of the Indiana Hospital for the Insane.

Third Annual Report of the Directors of the West Virginia Hospital for the Insane, for 1866.

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Medical Register of the District of Columbia, for 1867. By J. M. Toner, M. D.

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Report of the Western Pennsylvania Hospital, for 1866.

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Report of the Western Asylum of Kentucky, for 1866.

Report of the Northern Ohio Asylum, for 1866.

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Thirteenth Report upon the Registration of Births, Deaths, and Marriages in the State of Rhode Island, for the year ending December 31st, 1866. By Edwin M. Snow, M. D.

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Report of the Worcester Hospital for the Insane, for 1866.

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Report of the New Jersey State Asylum, for 1866.

Report of the Mount Hope Institution, for 1866.

Report of the Western Asylum of Virginia, for 1865 and 1866.

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Report of the New Hampshire Asylum, for 1866 and 1867.

Report of the Vermont Asylum, for 1866 and 1867.

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Report of the Northampton State Hospital, for 1865 and 1866.
Report of the Hartford Retreat, for 1866 and 1867.
Report of the General Hospital of Connecticut, for 1867
Report of the Bloomingdale Asylum, for 1866.
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Remarks on Classical and Utilitarian Studies. By Jacob Bigelow, M. D.

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How far do the Facts accompanying the prevalence of Epidemic Cholera in Chicago, during the summer and autumn of 1866, throw light on the Etiology of that Disease? By N. S. Davis, M. D., Professor of Principles and Practice of Medicine, and of Clinical Medicine, Chicago, Illinois.

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REPORT OF THE SECTION

ON

Chemistry and Materia Medica.

REPORT OF THE SECTION

ON

CHEMISTRY AND MATERIA MEDICA.

THURSDAY, May 7, 1868.

THE Section organized at 3.30 P. M., by electing Dr. J. E. MORGAN, of D. C., Chairman, and Dr. L. J. DEAL, of Penna., Secretary.

Dr. H. R. NOEL, of Md., having expressed a wish to bring before the notice of the Section some new ideas with regard to the decomposition of urea in uræmic poisoning, on motion of Dr. J. M. TONER, of D. C., a committee was appointed on that subject, consisting of Drs. H. R. NOEL and G. D. BEATTY, of Md., and T. ANTISELL, of D. C.

The report of the Committee "On the Cultivation of the Cinchona Tree" was then read by Dr. J. M. TONER, Chairman of the Committee.

After a considerable discussion of this matter by Drs. NOEL, DEAL, MORGAN, and TONER, the following resolution was adopted:—

Whereas, It is known that the supply of Cinchona, heretofore received from South America, is steadily and rapidly decreasing in quantity; and,

Whereas, Successful attempts have been made at various times to cultivate the Cinchona tree in other localities; and

Whereas, It is believed that the climate and other conditions necessary for its production exist in this country; therefore,

Resolved, That this Association appoint a committee to memorialize Congress with regard to this matter, urging upon it the great advantages which would result from the cultivation of this plant in the United States.

The Section nominated the following committee, subject to the

approval of the Association: Drs. LEMUEL J. DEAL, of Penna. (Chairman); T. A. LOGAN, of California; and J. M. BIGELOW, of Michigan.

There being no other business before the Section, on motion, it adjourned.

LEMUEL J. DEAL,
Secretary of the Section.

REPORT OF THE SECTION

ON THE

Practice of Medicine and Obstetrics.

REPORT OF THE SECTION

ON THE

PRACTICE OF MEDICINE AND OBSTETRICS.

THURSDAY, May 7, 1868.

THE Section organized by appointing Dr. R. R. McILVAINE, of Ohio, Chairman, and Dr. C. M. FINCH, of Ohio, Secretary.

Dr. J. P. GARRISH, of New York, read a paper on *Tsa-tsin*, or *Rhynchosa Excavata*, as an agent of value in Amenorrhœa and Dysmenorrhœa, which elicited considerable discussion.

On motion of Dr. M. B. WRIGHT, of Ohio, the paper by Dr. GARRISH, was referred to its author to report more fully at the next meeting of the Association.

On motion of Prof. PALMER, of Michigan, the Section adjourned.

C. M. FINCH,
Secretary of Section.

REPORT OF THE SECTION

ON

Psychology.

REPORT OF THE SECTION

ON

PSYCHOLOGY.

THE Section organized by appointing Dr. D. F. CONDIE, of Penna., Chairman, and Dr: C. A. LEE, of New York, Secretary.

A report *On Insanity*, by Dr. C. A. LEE, of New York, Chairman, was presented, and, after eliciting much discussion, was referred to the Committee of Publication.

A report on *Provision for the Chronic Insane* was presented by Dr. LEE for Dr. JOHN B. CHAPIN, of New York, Chairman, and was similarly referred.

The Section then adjourned.

CHAS. A. LEE,
Secretary of Section.

REPORT

ON

INSANITY.

REPORT ON INSANITY.[1]

It may now be considered the settled policy of the American Medical Association to recognize every branch of medical science as coming within the proper scope of its scientific research and inquiry, and to regard no subject relating to the physical or mental condition of man as outside of its legitimate care and study. The conviction of this truth led to the appointment of two committees at our last annual session, to report at the present meeting on *Insanity*, one of which was composed entirely, with the exception of the chairman, of superintendents of insane hospitals, and by his resignation and the substitution of J. B. Chapin in his place, wholly of such. In drawing up the present report the writer desires to acknowledge his indebtedness to several of those in charge of these institutions, particularly Dr. Earle, of the Northampton Lunatic Hospital; Dr. Jarvis, of Dorchester, Mass.; and Dr. Hills, of the Insane Hospital of Western Virginia.

It is a source of great gratification to the philanthropist to contemplate the great advance made in the management of the insane within the last half century; an advance equally honorable to science and humanity; and whether regarded in a civil, social, or moral point of view, we can but rejoice in the triumphs it has achieved and the benefits it has bestowed upon a most unfortunate class of our fellow-men.

It is not the aim of this report to inquire into the proper method of the study of mind, whether physiological or psychological, or a combination of both; or to investigate, unless very briefly, its pathology. There are many learned treatises relating to these topics, which the reader may consult at his leisure. Our object will be attained if we are able to present a tolerably correct view of the present number, condition, and wants of the insane of the United States.

[1] The entire responsibility of this report rests on the Chairman alone.

NUMBER OF THE INSANE IN THE UNITED STATES.—It is well known that we have no accurate statistics in regard to the number of the insane in the United States. The United States Census of 1860 gave the total population 31,443,322, and the number of the insane 23,999; which is 1 to 1305 of the population. This estimate, however, is known to have been very inaccurate. In 1854, Dr. Edward Jarvis, of Massachusetts, made a very careful estimate of the numbers of the insane in that State, and found them in the ratio of 1 to 427 of the population. A careful census of the insane in King's County, New York, recently taken, shows 1 insane to 900 of the population. In California, a recent census gives 1 to 600. In New England, generally, there is about the same ratio as in Massachusetts. In Great Britain, there is 1 to 400 of the population. In France, about the same. In the late slave States, the number of insane is considerably less than in the other States; the negroes being far less liable to insanity than the whites. Taking the whole United States into our calculation, 1 insane to 700 of the population would, probably, be a safe estimate. The population of the United States is now about 38,000,000; making due allowance for retardation of progress caused by the war, and reckoning 1 to 700, we have a total of 54,288 insane in the United States. This is much less than is found in any of the older nations of Europe, and cannot be regarded as an exaggeration.

CAUSES OF INSANITY.—Nothing is more difficult, in many cases of insanity, than to determine the true cause; and this arises, for the most part, from the fact that, in a large majority of cases, there is a concurrence of conditions; not one single effective cause, as is generally assumed. Doubtless all the conditions which conspire to the production of an effect are alike causes, alike agents; and, therefore, as Maudesley has remarked, all the conditions, whether they are in the individual or in the circumstances in which he is placed, which, in a given case, coöperate in the production of disease, must alike be regarded as causes. We are indebted to Dr. Jarvis, of Massachusetts, for the following table, which, we think, will very clearly confirm the truth of these remarks. If we seek to know why "*fright and fear,*" for example, cause insanity in one individual and not in another; why "*grief, and sorrow, and anxiety*" drive one person to madness and not another; why "*domestic trials,*" "*vicious indulgence,*" or any other alleged cause, brings on madness occasionally, but not always, we must seek for it in all the circum-

stances, internal and external, as well as in hereditary antecedents, by which certain conditions or agents are likely to prove operative in one case and not in another. There is no accident in madness. It is not a dispensation of Providence. It is the result of certain antecedents operating upon individuals predisposed to abnormal results. A long chain of antecedents precedes the final explosion. Hence the alleged causes are only the *apparent causes.* The germ of the disease is planted in the very constitution itself. But little if anything is gained by specifying any moral cause, as grief, vanity, or ambition, as productive of insanity. It may be the most prominent feeling at the time. It may well be doubted, therefore, whether we can discriminate, accurately, between moral and physical causes. This is especially the case where a strong hereditary taint exists. We believe that, in general, if not always, the cause is physical, and may be found either in strong inherited predisposition or defective development of the brain. In a recent visit to the Government Hospital of the Insane, we found that in more than nine cases out of ten this was manifestly the case. Indeed, the most casual observer could scarcely have failed to notice it. The patients had been mostly soldiers. The public, generally, and even our legal brethren, are very apt to regard insanity as a vice of a purely moral nature, while the clergy would often seem to regard its existence as demonstrative proof of the truth of the doctrine of *total depravity.* On the contrary, insanity is just as much the result of physical conditions as idiocy is. Moral causes, in their intensity, cause physical changes, especially in the brain; and these, in their turn, cause disordered function of this organ—in other words, insanity. Health, either of body or mind, implies a harmonious relation between the organism and the external world; let this relation be disturbed in either of these aspects by causes acting from without or within, and especially by a concurrence of such causes; and if there be a predisposition existing, or an inherent weakness, or other morbid state of the nervous element, insanity may follow. The true mode, therefore, of guarding against insanity is the employment of those means which tend to the promotion of the general health and the invigoration of the nervous system; while the corollary is no less true that the only philosophical mode of treating insanity is the same hygienic management which is essential to the preservation of health, of which active exercise in the open air stands at the head.

If these statements be true, then there is nothing gained by attempting to draw an exact line between the action of moral and physical causes. It is now conceded that while through life moral manifestations determine physical organization, causing physical changes in the nervous centres; on the other hand, imperfect physical development necessitates morbid, mental, and moral manifestations, each in its turn tending to the same result.

Of the *predisposing causes* of insanity little need be said. Unfortunately they are seen on every hand in every highly civilized country, and in the ratio of its degree of civilization. In proportion to the progress of moral development, as well as all forms of organic development, is there a liability to disease; the increase of insanity is only the penalty which high civilization and increased mental activity necessarily pay. Among children, we find idiocy; among savages, imbecility; but nowhere do we meet with moral insanity where there is no moral development. Mental organization precedes mental disorganization. Insanity is rare among negroes and the lower class of Irish; in New England it abounds.

TABLE I.—*Causes of Insanity of* 14,941 *out of* 24,793 *Patients who have been treated in Sixteen Hospitals in the United States.* By Dr. E. JARVIS, Massachusetts.

Ill health of various kinds	3586
Apoplexy, epilepsy, and palsy	592
Female derangements	1415
Injuries and accidents	338
Exposures to heat, cold, etc.	226
Excess of labor, privation of sleep, etc.	522
Excess of study, mental struggles, excitements, etc.	492
Anxieties, struggles, and trials of business, poverty, etc.	1134
Disappointments in respect to ambition, property, etc.	156
Disappointed love	559
Spirit rappings, and mesmerism	182
Fright and fever	182
Home sickness	46
Grief, sorrow, and anxiety	1549
Domestic trials, persecutions, etc.	665
Connected with religion	1280
Bad education, wrong plan of life	67
Intemperance	1788
Use of tobacco and opium	110
Vicious indulgence	1011
Bad temper, passion, etc.	161
Total	14,941

HISTORY OF INSANE HOSPITALS IN THE UNITED STATES.[1]

The first Hospital for the Insane in the United States was founded in Philadelphia, in 1751, under the Charter of the Pennsylvania Hospital. This Charter, passed by the Legislative Assembly of that Colony, wisely provided not only for the "sick poor," but, also, for the reception and cure of lunatics. The hospital was open for the reception of patients on February 11, 1782; since which, it has quietly and successfully pursued its course, aided, occasionally, by legislative aid; but finding its chief support in the philanthropy and liberality of private citizens. Its managers proceeded very slowly in extending and improving the accommodations for the insane, enlarging its usefulness according to the wants of the community; securing to its citizens a convenient place for cure and treatment when suffering from this sad affliction, till we find the present Pennsylvania Hospital for the Insane, under the charge of Dr. Kirkbride, one of the most extensive, convenient, and successful lunatic establishments in the United States. It is the only institution in the country where separate provision is now made for males and females in distinct and widely separated buildings; an arrangement which was carried out in 1860, and the utility and advantages of which are recognized and acknowledged by all who have had experience in the management of the insane. The male department was built and furnished solely by private donations.

To Virginia, belongs the honor of making the next move in this humane undertaking; and, indeed, the sole honor of being the pioneer in the establishment of an institution devoted exclusively to the insane. As early as November 10, 1769, the legislature of this colony passed an act, incorporating a hospital at Williamsburg, for lunatics and idiots, at an expense of £1090, which was opened for the reception of patients, September 14, 1773. Its career of usefulness was suspended during the Revolutionary War, when it was evacuated, and used as barracks for troops; but was reopened soon after its close, and has been in successful operation ever since.

The next provision for the insane was made by the colony of New York, in the year 1771, under a charter granted by the Earl

[1] For this history, we are chiefly indebted to Pliny Earle, M. D. See Preliminary Report on the Eighth Census, 1860.

of Dunmore, then governor of the colony. This institution is now known as the New York Hospital in the city of New York. This was not open for the reception of patients till January 3, 1791; and it was not until 1797 that insane patients were admitted. This branch of the hospital is now known as the Bloomingdale Asylum for the Insane, and was opened in 1821.

Such was all the provision made in the United States for the care of lunatics, previous to 1800, when the total population amounted to about five and a half millions; since which, the annual increase has averaged 35 per cent., and, of the insane, a constantly increasing ratio to the population. The treatment, however, up to that period was custodial rather than curative; the severest forms of bodily restraint were in common use; and insanity was regarded in the light of a supernatural infliction, and generally incurable by physical or moral remedies. What was aimed at, was, the protection of themselves and the community, and the relief of their friends and families, not the restoration of reason, if even the restoration of bodily health. All this has been changed. The primary object of hospital care for lunatics now, is the restoration of reason; while custody is, or should be made, merely subservient to this. As a matter of political economy, we have better learned to estimate the value of a restored mind to the community; and the loss it sustains by the prevalence of such a calamity; but few can appreciate the importance of these institutions, when regarded as a source of relief to families as well as to society.

It is not the object of this brief historical sketch to trace the progress of hospital treatment of the insane in foreign countries, but we may, in passing, allude to the impulse given by the labors of the celebrated Pinel, who, in 1791, removed all bodily restraints from his patients in the Bicêtre Hospital in Paris, and taught the world that self-evident truth, that, both among sane and insane, violence begets violence, and force begets force. The humane and enlightened treatment thus conspicuously begun, was adopted and carried out in England at the Friends' Retreat at York, an institution established by the celebrated William Tuke, and opened for patients in the year 1796. The influence of these reforms extended to Germany and other countries of Europe, even before the close of the eighteenth century; and, after a comparatively long period, they slowly began to influence the management of this class in our own country. But this humane reform had to contend against the superstition, the precedents, and the prejudices of ages; and even

yet, satanic, or other diabolical possession, is still the favorite theory of many individuals.

In the year 1797 seven acres of land in the vicinity of Baltimore were given by Mr. Yellat to the State of Maryland, on condition that the government would found a hospital for the treatment of insanity and general diseases. In 1798 an appropriation was made by the municipal government, which was increased by the donation of individuals, for the construction of suitable buildings; but the institution did not go into operation until 1816.

The Asylum for the Relief of Persons Deprived of their Reason was the natural offspring of the English Retreat at York, and founded in 1812 by the same religious denomination, viz., the Society of Friends. The institution was opened in May, 1817, and has since been in successful operation. No lunatic hospital in our country has, perhaps, won a higher reputation for the management of lunatics than this.

About the same time, the trustees of the Massachusetts General Hospital, in Boston, took measures for the establishment of a branch department of that institution for the reception of lunatics, which was constructed near Charlestown, now Somerville, and was opened for patients October 6, 1818, under the name of the McLean Asylum for the Insane.

During the decennium terminating in 1830, five institutions for the care and curative treatment of the insane went into operation, namely, the Bloomingdale Asylum, already referred to (1821); The Retreat for the Insane, at Hartford (1824); The Kentucky Eastern Lunatic Asylum, at Lexington (1824); The Western Lunatic Asylum of Virginia, at Staunton (1828); and The State Lunatic Asylum of South Carolina, at Columbia (1828).

During the next decennium, 1830 to 1840, seven lunatic hospitals were established, namely, The Massachusetts State Lunatic Hospital, at Worcester (1833); The Vermont Asylum for the Insane, at Brattleboro (1836); The Central Ohio Lunatic Asylum, at Columbus (1838); The City Lunatic Asylum, at South Boston, Massachusetts (1839); The New York City Asylum, Blackwell's Island (1839); The Maine Insane Hospital, at Augusta (1840); The Tennessee Hospital for the Insane, at Nashville (1840).

During the next decennium, 1840 to 1850, the following institutions for the insane went into operation, viz: The Pennsylvania Hospital for the Insane, a branch of the Penn General Hospital, was opened in this new building in 1841; The New Hampshire

Asylum for the Insane was opened at Concord in 1842; The Mount Hope Institution, at Baltimore, Maryland, in 1842; The Lunatic Asylum of the State of Georgia, at Milledgeville, in 1842; The New York State Lunatic Hospital, at Utica, in 1843; The Kings County (N. Y.) Lunatic Hospital, at Flatbush, 1845; The Butler Hospital for the Insane, at Providence, Rhode Island, in 1849; The New Jersey State Lunatic Asylum, at Trenton, in 1845; The Indiana Hospital for the Insane, at Indianapolis, in 1848; The Insane Asylum of the State of Louisiana, in 1848; The Maryland Hospital, at Baltimore, also became an insane hospital by the removal of the patients with general diseases, during the same period.

During the next decade (1851 to 1860) eighteen new institutions went into operation: The State Lunatic Hospital of Pennsylvania, at Harrisburg (1851); The State Lunatic Asylum of Missouri, at Fulton (1851); The Illinois State Hospital for the Insane, at Jacksonville (1851); the new building of the Tennessee Hospital, near Nashville (1852); The State Insane Asylum of California, at Stockton (1853); The Hamilton County Lunatic Asylum, or Longview Asylum, near Cincinnati, Ohio (1853); The Massachusetts State Lunatic Hospital, at Taunton (1854); The Western Lunatic Asylum of Kentucky, at Hopkinsville (1854), since destroyed by fire; The United States Government Hospital for the Insane, near Washington, D. C. (1855); the new building of the Kings County Lunatic Asylum, N. Y. (1855); The Mississippi State Lunatic Asylum, at Jackson (1855); The Southern Ohio Lunatic Asylum, at Dayton (1855); Brigham Hall, a corporate institution, at Canandaigua, New York (1855); The Insane Asylum of North Carolina, at Raleigh (1856); a Department of the Western Pennsylvania Hospital, at Pittsburg, now called the Dixmont Hospital for the Insane (1856); Massachusetts State Lunatic Hospital, at Northampton (1858); New York State Asylum for Insane Convicts, at Auburn (1858); The Michigan Asylum for the Insane, at Kalamazoo (1859); Department of the Marshall Infirmary, at Troy, New York (1859); The Alabama Hospital for the Insane, at Tuscaloosa (1860); Wisconsin State Lunatic Asylum, at Madison (1860).

Since 1860, several new insane hospitals have been erected, or are now in course of erection. Among the former are the Iowa State Hospital for the Insane, at Mount Pleasant, opened in 1861; Texas Lunatic Hospital, at Austin; The Bay View Lunatic Asylum, near Baltimore; The Massachusetts Receptacle for the Insane, at Tewksbury; The Eastern Lunatic Asylum, at Lexington, Kentucky. The

State of New York has, by an act of her legislature, authorized and provided for the erection of two new State hospitals, each capable of accommodating five hundred patients; one of which is located at Ovid, on the Seneca Lake; the other at Poughkeepsie, on the Hudson River. Ohio has made appropriations, amounting in the aggregate to $585,000, for increasing the capacity of the Northern and Southern Asylums, and the erection of a new one. Kentucky has made appropriations during the last year (1867) for the erection of two additional and spacious buildings, in connection with the Eastern Asylum of the State.

TABLE II.—*Asylums in the United States*, 1843.

No.	Asylums.	Where situated.	Opened.	Beds.	Farm.
1	State Lunatic Hospital . .	Williamsburg, Va.	1773	130	20 acres
2	Friends'	Frankford, Pa. . .	1817	65	65 "
3	McLean	Charlestown, Mass.	1818	140	30 "
4	Bloomingdale	near New York City	1821	140	50 "
5	Retreat	Hartford, Conn. .	1824	100	17 "
6	Kentucky State Hospital .	Lexington . . .	1825	130	18 "
7	South Carolina State "	Columbia . . .	1827	100	34 "
8	Western " "	Staunton, Va. . .	1828	140	65 "
9	Massachusetts " "	Worcester . . .	1833	232	80 "
10	Georgia " "	Milledgeville . .			
11	Vermont " "	Brattleboro' . . .	1836	130	50 "
12	Ohio " "	Columbus	1838	140	57 "
13	New York City "	Blackwell's Island .	1839	300	
14	Boston City "	South Boston, Mass.	1839	100	4 "
15	Maryland " "	Baltimore . . .	1839	150	10 "
16	Tennessee " "	Nashville . . .	1840		
17	Maine " "	Augusta	1840	120	70 "
18	Pennsylvania Hospital . .	near Philadelphia .	1841	230	101 "
19	New Hampshire State Hosp.	Concord	1842		
20	New York " "	Utica	1843	300	
				2,547	

TABLE III.—*Showing the Progress of Hospital Accommodations within Twenty-five Years previous to* 1855.

Years.	Patients admitted.	Years.	Patients admitted.
1830	332	1843	1634
1831	379	1844	1725
1832	481	1845	2004
1833	639	1846	2107
1834	456	1847	2723
1835	461	1848	3070
1836	545	1849	3082
1837	628	1850	3144
1838	697	1851	3491
1839	949	1852	3736
1840	999	1853	4151
1841	1145	1854	4243
1842	1105	1855	4383

Forty years ago there was only one hospital for the insane in the United States. In 1820, there were three; in 1830, eight; in 1840, fourteen; in 1845, twenty; in 1850, twenty-seven; in 1855, thirty-seven; in 1868, fifty-four, and six erecting.

THE LATE SLAVE STATES.—According to the United States Census of 1860, the number of *insane* and *idiotic* assigned to the Southern States was as follows:—

	Insane.	Idiotic.	The number in the ratio of	
			1 to 1000.	1 to 800.
Virginia	789	801	1724	2155
North Carolina	664	987	1070	1337
South Carolina	451	573	738	923
Georgia	464	459	1173	1453
Florida	178	484	199	240
Alabama	257	537	1848	1898
Mississippi	272	269	1661	2076
Louisiana	169	247	1770	2212
Tennessee	640	881	1186	1488
Arkansas	87	176	756	946
Texas	125	201	773	966
Missouri	770	510	1784	2231
Kentucky	623	1058	1155	1331

We have no reliable statistics in regard to insanity in the colored race, and especially in the slave population. The last United States census gives 406 as the total number of insane among a slave population of 3,961,000; which is in a ratio of 1 to 9756; while the number 23,593 is given as the total number of insane among the whites, which is in the ratio of 1 to 1144 of the white population. The ratio of 1 to 1500 of the blacks is, probably, very near the truth, taking the whole colored population into account.[1]

[1] Insanity has evidently been on the increase among the blacks of the South since the close of the war.

TABLE IV.—*Showing the Name, Location, State, Foundation, Date of Opening, Present Superintendent or Physician, Number of Patients, and Date of Reported Number of Patients, of Existing Insane Hospitals in the U. S.* (1868).

No.	Title.	Location.	State.	Foundation.	Date of opening.	Present Superintendent or Physician.	No. of patients.	Date of the reported number of patients.
1	Eastern Lunatic Asylum	Williamsburg,	Virginia,	State,	...	Dr. R. M. Garrett,	206	Oct. 1, 1866
2	Friends' Asylum	Philadelphia,	Pennsylvania,	Corporate,	1817	" J. H. Worthington,	59	Mar. 1, 1867
3	McLean Asylum	Somerville,	Massachusetts,	"	1818	" John E. Tyler,	178	Jan. 1, 1868
4	Bloomingdale Asylum	New York,	New York,	"	1821	" D. Tilden Brown,	161	Dec. 31, 1867
5	Retreat for the Insane	Hartford,	Connecticut,	"	1824	" John S. Butler,	240	April 1, 1867
6	Eastern Lunatic Asylum	Lexington,	Kentucky,	State,	1824	" W. S. Chipley,	258	Sept. 30, 1867
7	State Lunatic Asylum	Columbia,	South Carolina,	"	1828	" J. W. Parker,	192	About 1860
8	Western Lunatic Asylum	Staunton,	Virginia,	"	1828	" Francis T. Stribling,	338	Sept. 30, 1867
9	Lunatic Hospital	Worcester,	Massachusetts,	"	1833	" Merrick Bemis,	355	Sept. 30, 1867
10	Maryland Hospital	Baltimore,	Maryland,	"	1834	" John Fonerden,	52	Dec. 31, 1867
11	Insane Department Philadelphia Hospital	Philadelphia,	Pennsylvania,	Pauper,	...	" D. D. Richardson,	523	About 1861
12	Asylum for the Insane	Brattleboro',	Vermont,	State,	1836	" Wm. H. Rockwell,	511	Aug. 1, 1867
13	Central Lunatic Asylum	Columbus,	Ohio,	"	1838	" William L. Peck,	330	Nov. 1, 1867
14	Boston City Lunatic Asylum	South Boston,	Massachusetts,	Pauper,	1839	" Clement A. Walker,	174	May 1, 1867
15	New York City Lunatic Asylum . .	New York,	New York,	"	1839	" R. L. Parsons,	767	Dec. 31, 1866
16	Insane Hospital	Augusta,	Maine,	State,	1840	" Henry M. Harlow,	303	Nov. 30, 1867
17	Hospital for the Insane	Near Nashville,	Tennessee,	"	1840	" Wm. P. Jones,	271	Oct. 1, 1867
18	Pennsylvania Hospital for the Insane .	Philadelphia,	Pennsylvania,	Corporate,	1841	" Thomas S. Kirkbride,	344	Dec. 31, 1867
19	Asylum for the Insane	Concord,	New Hampshire,	State,	1842	" Jessie P. Bancroft,	246	May 1, 1867
20	Mount Hope Institution	Baltimore,	Maryland,	Mixed,	1842	" William H. Stokes,	152	Dec. 31, 1867
21	Lunatic Asylum	Milledgeville,	Georgia,	State,	1842	" Thomas F. Green,	27	About 1859
22	Lunatic Asylum	Utica,	New York,	"	1843	" John P. Gray,	641	Nov. 30, 1866
23	Butler Hospital for the Insane . .	Providence,	Rhode Island,	Corporate,	1847	" J. W. Sawyer,	131	Dec. 31, 1867
24	Lunatic Asylum	Trenton,	New Jersey,	State,	1848	" H. A. Buttolph,	450	Nov. 30, 1867
25	Insane Asylum	Jackson,	Louisiana,	"	1848	" Preston Pond,	171	Dec. 31, 1866
26	Hospital for the Insane	Indianapolis,	Indiana,	"	1848	" Wilson Lockhart,	273	Oct. 31, 1866
27	Lunatic Hospital	Harrisburg,	Pennsylvania,	"	1851	" John Curwen,	340	Dec. 31, 1867
28	Hospital for the Insane	Jacksonville,	Illinois,	"	1851	" Andrew McFarland,	318	Dec. 1, 1866
29	Lunatic Asylum	Fulton,	Missouri,	"	1851	" R. Abbott,	233	Nov. 26, 1860

No.	Title.	Location.	State.	Foundation.	Date of opening	Present Superintendent or Physician.	No. of patients.	Date of the reported number of patients.
30	Insane Asylum	Stockton,	California,	State,	1851	Dr. G. A. Shurtleff,	769	Oct. 1, 1867
31	Longview Asylum	Mill Creek,	Ohio,	Co. pauper	1853	" O. M. Langdon,	414	Oct. 31, 1867
32	Lunatic Hospital	Taunton,	Massachusetts,	State,	1854	" George C. S. Choate,	376	Sept. 30, 1867
33	Western Lunatic Asylum . . .	Hopkinsville,	Kentucky,	"	1854	" James Rodman,	253	Oct. 1, 1867
34	Lunatic Asylum	Jackson,	Mississippi,	"	1855	" A. B. Cabaniss,	106	Oct. 1, 1859
35	U. S. Government Hospital for Insane .	Near Washington	Dist. Columbia,	U. States,	1855	" Charles H. Nichols,	280	June 30, 1867
36	Northern Lunatic Asylum . . .	Newburg,	Ohio,	State,	1855	" Byron Stanton,	149	Oct. 31, 1867
37	Southern Lunatic Asylum . . .	Dayton,	Ohio,	"	1855	" Richard Gundry,	178	Oct. 31, 1867
38	Brigham Hall	Canandaigua,	New York,	Corporate,	1855	Drs. G. Cook & J. B. Chapin	40	About 1861
39	Kings County Lunatic Asylum . .	Flatbush,	New York,	Pauper,	1855	Dr. Edward B. Chapin,	516	July 31, 1867
40	Insane Asylum	Raleigh,	North Carolina,	State,	1856	" Edward C. Fisher,	165	Nov. 1, 1866
41	Western Pennsylvania Hospital . .	Near Pittsburg,	Pennsylvania,	Mixed,	1856	" Joseph A. Reed,	247	Dec. 31, 1867
42	Lunatic Hospital	Northampton,	Massachusetts,	State,	1858	" Pliny Earle,	413	Sept. 30, 1867
43	Asylum for Insane Convicts . . .	Auburn,	New York,	"	1858	" Chas. E. Van Anden,	70	Sept. 30, 1866
44	Asylum for the Insane	Kalamazoo,	Michigan,	"	1859	" E. H. Van Deusen,	172	Nov. 30, 1866
45	Hospital for the Insane	Madison,	Wisconsin,	"	1860	" A. H. Van Norstrand,	180	Sept. 30, 1867
46	Hospital for the Insane	Tuscaloosa,	Alabama,	"	1860	" Peter Bryce,	115	Oct. 1, 1867
47	Hospital for the Insane	Austin,	Texas,	"	1860	" W. P. Beall,	48	Mar. 1, 1867
48	Hospital for the Insane	Mt. Pleasant,	Iowa,	"	1861	" Mark Ranney,	344	Oct. 31, 1867
49	Hospital for the Insane	Weston,	West Virginia,	"	1864	" R. Hills,	45	Sept. 30, 1867
50	Hospital for the Insane	St. Peter,	Minnesota,	"	1866	" S. E. Shantz,	84	Nov. 30, 1867
51	General Hospital for the Insane . .	Middletown,	Connecticut,	"	1868	" A. M. Shew,		
52	The Willard Asylum	Ovid,	New York,	"	1868			
53	Asylum for the Colored Insane . .	Nashville,	Tennessee,	"	1868			
54	The Hudson River Asylum . . .	Poughkeepsie,	New York,	"	1868	" J. M. Cleaveland,		
55	The Sheppard Asylum	.....	Maryland,	Corporate,	1868			
56	The Marshall Infirmary	Troy,	New York,	Pauper,			22	
57	Kansas Insane Asylum	Opawattomie,	Kansas,	.....				
						Total . .	7229	

Total insane in the U. S. 54,285. Provided for, 7229. Unprovided for, 47,056.

TABLE V.—*Table of Insane Asylums, with Cost of Buildings.*

No.	Names.	Capacity.	Cost.	Cost per patient.
1	New York State Asylum, Utica . .	440	$517,400	$1,185
2	Maryland Hospital, Baltimore . .	130	213,600	1,443
3	McLean Asylum, Somerville, Mass. .	200	321,000	1,605
4	Pennsylvania Hospital for Insane .	240	330,000	1,377
5	New Hospital for Insane, Philadelphia	250	325,000	1,300
6	New Jersey Asylum, Trenton . . .	250	250,000	1,000
7	Marine Hospital for Insane . . .	175	150,700	861
8	Mt. Hope Institution, Baltimore . .	120	200,000	1,666
9	Butler Hospital, Providence, R. I. .	140	116,000	828
10	Lunatic Asylum, Taunton, Mass. .	250	250,000	1,000
11	Michigan Hospital, Kalamazoo . .	288	340,000	1,180
12	Northampton Hospital, Mass. . . .	250	335,000	1,340
13	Iowa Hospital, Mt. Pleasant . . .	250	359,666	1,440

Average cost per capita before the war	$1,248 00
Average cost, with 50 per cent. added, for increased prices	1,872 00
Average annual interest, per capita, reckoned on cost of building	87 36
For increased value, annual interest per capita . .	131 04

TABLE VI.—*Table of Insane Asylums, with Cost of Maintenance.*

No.	Name, &c.	Year.	Number of patients.	Annual cost of each.	Cost per week per patient.
1	Pennsylvania Hospital for Insane, Philadelphia	1866	310	$451	$8 68
2	Government Hospital, Washington, D. C. .	"	271	410	7 88
3	Northern Ohio, Newberg, O.	"	141	372	7 17
4	Nashville Hospital, Tenn.	"	181	333	6 40
5	Longview, Hamilton Co., Ohio . . .	"	388	311	5 98
6	Illinois Hospital, Jacksonville . . .	"	308	305	5 87
7	Southern Ohio, Dayton, Ohio . . .	"	170	292	5 61
8	New York State Asylum, Utica . . .	"	591	288	5 53
9	West Virginia Hospital, Weston . . .	"	45	282	5 42
10	Central Ohio, Columbus	"	290	250	4 80
11	Northampton Hospital, Mass. . . .	"	376	247	4 78
12	Dixmont Hospital, Pittsburg	"	206	237	4 57
13	Wisconsin Hospital, Madison . . .	"	180	233	4 48
14	Pennsylvania State Hospital, Harrisburg .	"	317	229	4 38
15	Staunton Hospital, Virginia	"	312	224	4 30
16	Eastern Kentucky, Lexington . . .	"	250	215	4 13

Average weekly cost	$5 65
Average weekly cost of maintenance, including interest on building, per capita	7 33

It thus appears that there are about 47,000 insane in the United States still unprovided for, except at home by their friends, or in poor-houses and jails; to support whom in asylums equally expensive with those already built, would cost over $12,000,000

annually, at five dollars only per week. But allowing one-half of the number to be cared for at home, then we have an annual expenditure of over $6,000,000 to support the remainder.[1]

TABLE VII.—*Showing the Number of Insane in Hospitals and Unprovided for in the following States, with Cost of Supporting all in Hospitals.*

States.	In hospitals.	Unprovided for.	Total number insane.	Annual cost of supporting all the insane in hospitals.	
				At $7 33 p. week.	At $4 00 p. week.
Alabama . . .	115	1003	1118	$426,132	$231,544
Arkansas . . .	none	757	757	288,538	157,456
California . .	800	1162	1962	747,835	408,096
Connecticut . .	390	676	1066	406,316	221,728
Delaware . . .	none	168	168	64,034	34,944
Florida . . .	none	199	199	75,850	41,392
Georgia . . .	27	1139	1163	442,769	241,904
Illinois . . .	318	2592	2910	1,109,175	605,280
Indiana . . .	273	2138	2411	928,961	501,488
Iowa . . .	500	1200	1700	648,072	353,600
Kansas . . .	22	200	222	79,417	48,176
Kentucky. . .	511	771	1282	488,647	266,656
Louisiana . .	171	724	895	351,377	186,160
Maine . . .	303	529	832	317,125	173,056

It is quite unnecessary to make out a similar table for all the States; we have taken States from different sections of the Union, north, middle, west, and south, and from these we can form sufficiently accurate estimates for the others. We think they demonstrate, very clearly, the impracticability of supporting all the insane, that need to be provided for, in asylums like those already erected; and that some intermediate and cheaper mode will have to be resorted to for such provision. Let us, however, take up some of the individual States, and see how the matter stands.

MASSACHUSETTS.—The population of Massachusetts in 1860, was 1,231,066, and as the ratio of the movement of the population in that State may be reckoned at 25 per cent. for the last decade; or 17.5 per cent. for the last 7 years, the present population will number about 1,440,347—allowing 1 insane to 500 population, which is less than the census of the commissioners in 1854 made it, we have 2880 insane in Massachusetts; of these, 1646 are provided for, either at the public asylums or the State almshouse, at

[1] The example of the Vermont Lunatic Asylum, however, shows that insane hospitals may be so conducted as to be nearly, if not quite, self-supporting.

Tewksbury (where 150 have been cared for the last year), leaving 1234 at their own homes, or at the poor-houses and jails, in various parts of the commonwealth. The State Board of Charities of this State, which has always taken the lead in philanthropic measures for the welfare of the people, is grappling manfully with this question of provision for its insane, and, we have no doubt, will solve the problem sooner or later, in the interests of humanity and the public good. Their object is to avoid building any more huge establishments for the insane, and in their stead, work out a way whereby, at a moderate expense, this forlorn class may receive every attention and comfort that an enlightened humanity demands, or they are capable of enjoying. To accomplish this, the Board recommends that in all cases where the chronic insane can be made happy and comfortable at home, a small weekly allowance should be made by the State to the family, equal only to the support of the patient in the almshouse ($2.00 per week), while the patient should be under the supervision of an officer of the Board, and frequently visited by him. Besides this, it is suggested that such incurables as ought not to live at home, should be "boarded out" in the country, as in Scotland, in families where they would be kindly cared for; where they should be encouraged to labor daily, and subjected to proper supervision. In this way the large hospitals would be relieved of a class who would be benefited by greater freedom and out-door life, while it would leave the superintendents free to exercise all their energies and skill for the management of recent and curable cases. Thus their powers would not be wasted, and their lives sacrificed, in attempting to supervise in addition, the individual units in a mass of imbecility and idiocy; which science and experience tell them cannot be cured or improved where they are.

In this connection it is proper to notice the fact, that the experiment of sending a portion of the chronic insane, in the hospitals, to the lunatic asylum at Tewksbury, which is in connection with the State almshouse, where they are regularly employed in labor, has, thus far, been attended with marked success. The measure has tended to relieve the overcrowded hospitals; to prevent calling for measures precedent to erecting a fourth lunatic hospital; to afford the incurables a better opportunity for labor than the hospitals could provide without incurring undue expense and trouble; and lastly, to save, in the support of these incurables, a considerable sum to the State; the average weekly expense of each patient

being but $1.77 per week, instead of $15 per month, which the State pays for its hospital patients. A considerable number of these patients who would do no work in the hospitals, labored steadily, earning over $20 per month. Still, the Board do not advise congregating the chronic cases in almshouses.

There were admitted at the different establishments for the insane of Massachusetts in the year ending September 30, 1867, excluding duplicates, 1097; the whole number being 2780; of whom 992 were discharged; 375 recovered; 202 improved; 102 not improved; 237 died. From 50 to 75 of the average number were from other States; while about 30 Massachusetts patients were treated in hospitals out of the State. The whole number of insane persons in the hospitals and State and town almshouses during the year was probably about 3000, the average number not less than 2200. (Report "*State Board Charities*," 1868.)

CONNECTICUT.—The population of Connecticut in 1860 was 460,147. During the decade, from 1850 to 1860, the increase of its population was 24.10 per cent.; at the rate of increase its present population is 533,600. This State is well known to be one of the *foci* of insanity of our country, numbering over 1 insane to every 500 of its people—which gives 1066 as its total number of lunatics.

To provide for these, there are:—

	Number of patients.
1. The Retreat for the Insane, Hartford	240
2. The General Hospital for the Insane at Middletown, opened the present month.	

Supposing this to accommodate 300 patients, we have still over 500 to be provided for; which will require another institution of still larger size.

NEW YORK.—The population of the State of New York in 1860 was 3,880,735. According to the ratio of movement of its population for the last decade, it is now about 4,850,000. Its insane may safely be reckoned as 1 to 700, as has been actually ascertained by an accurate census of Kings County. The present provision for this class is as follows:—

Kings County Lunatic Asylum	516
Brigham Hall	40
Asylum for Insane Convicts	70
Bloomingdale Asylum	161
New York City Lunatic Asylum	767
State Lunatic Asylum, Utica	641
Total	2195
Total number of Insane in the State	6929
Provided for	2195
Leaving	4734

in almshouses, jails, and at their own homes. The State, however, has provided for the erection of two additional asylums, one at Ovid and one on the Hudson, at Poughkeepsie; each capable of accommodating 500 patients; at an estimated expense of over half a million dollars to each establishment. After these are filled, if there were no increase in the mean time, there will still remain 3734 to be provided for; which will require seven more large establishments of the size of the State Hospital at Utica, at an expense of nearly two and a half millions. The annual expense of supporting all the insane of the State of New York, in hospitals, on the present plan, including the interest on the buildings, would amount to about one million and a half of dollars; at $4 per week, $776,672. But it is to be borne in mind, that in every civilized community, more persons annually become insane than are removed by death, recovery, or any other cause; and that, consequently, there is a constantly increasing accumulation in proportion to the population. This increase, it is believed, will go on for some time yet, but not indefinitely; inasmuch as certain elements of correctional agencies exist, which, at length, will not only arrest the increase, but bring about a decrease.

The asylum at Utica is the only State provision for the insane poor in the State of New York. The counties of New York and Kings have county asylums. Two classes, supported at public expense, are received at the asylum at Utica, the indigent and pauper; there are also private pay-patients. The county judges are authorized to send patients in indigent circumstances, but not paupers, who have been insane less than one year, and such patients may remain two years unless they sooner recover. The county superintendents of the poor send patients of the pauper class either to the State asylum or to the county poor-houses. Those sent to the State asylum by the superintendents of the poor are mostly

recent cases. These are subject to removal by the superintendents of the poor; and the law also provides for the removal of patients of the indigent or pauper class, when, in the opinion of the superintendent of the asylum, they are not likely to be benefited by remaining longer, and the room they occupy is needed for recent cases.

Seventeen years ago the State asylum began to return the chronic insane to the county poor-houses. Under the operation of the State lunacy laws, the insane population of these receptacles has been yearly increased, from this and other sources, until the number is now considerably over fifteen hundred. The act creating the new Willard Asylum for Chronic Cases contains, among others, the following important provisions:—

1st. That all cases of insanity of less than one year's duration shall be sent to the asylum at Utica.

2d. That after the completion of the Willard Asylum no more chronic cases shall be sent from the State asylum to the county poor-houses, but shall be transferred to the Willard Asylum.

3d. That when the Willard Asylum shall be ready for the reception of patients, the Board of Trustees and the Governor of the State designate the counties from which the chronic insane now in the county houses shall first be sent to said asylum.

The design of the Willard Asylum is to take the chronic insane poor just where the former lunacy laws of the State failed to make provision for them, and left them to fall into the county house receptacles; it will take those who, under the operation of the same State laws, have been placed and long kept in these receptacles of wretchedness and provide for them in a humane and Christian-like manner, in an asylum built for their special care and treatment, under the supervision of a Board of Trustees to be appointed by the Governor and Senate, with a competent medical superintendent as the chief executive officer.

The plan of building at Ovid comprises a hospital for the paroxysmal, excited, and grossly demented, with sections of cottages, plain and inexpensive in their construction, for those whose condition is such as to permit of their being employed in agricultural, horticultural, or other industrial pursuits, with benefit to themselves and the asylum. It is believed that the plan of building here indicated will materially reduce the cost of construction, allow of a system of classification and general management which will considerably diminish the cost of maintenance; at the same

time the health and happiness of the patients will be in the highest degree promoted. This plan also permits of expansion in such a manner as to obviate the objections to a large establishment under one roof. The institution is, in short, designed to supersede the miserable system of providing for the chronic insane in the poor-houses, and by placing them in an establishment adapted to their condition, care for them in accordance with medical and humane ideas, develop their industrial capacities and resources, and demonstrate the fact that they can be properly provided for at a cost per week which will place such care within the reach of every county, thus opening the way to the complete abandonment of county house receptacles.

It is claimed that this step is in advance of any made by any other State, in this direction; although Pennsylvania has very recently passed a law for a similar establishment in that State, and others will probably make similar provision. For the first time the important principle is recognized that the poor chronic insane are equally entitled with the acute recent cases, to proper care and treatment, under State provision; and any State which neglects to provide for all of this unfortunate class by the establishment of a humane, comprehensive system, is guilty of gross injustice and partiality.[1]

PENNSYLVANIA.—This State had a population in 1860 of 2,906,115. The United States census gave the number of insane as 2766. The ratio of the movement of the population from 1850 to 1860 was 25 per cent. Its present population is about 3,600,000, which at the same ratio as estimated for New York, gives 5190 total number of its insane; 2424 more than given by the United States census. The present provision for its insane is as follows:—

	Patients.
1. The Lunatic Hospital, Harrisburg	340
2. Western Pennsylvania Hospital	247
3. Friends' Asylum	59
4. Insane Department Philadelphia Hospital	523
5. Pennsylvania Hospital for Insane	344
Total	1513
Whole number	5190
To be provided for	3683

[1] See pamphlet on Provision for the Insane Poor of the State of New York, 1866. By G. Cook, M. D.

This will require *seven* new hospitals of the largest size, with a capacity, indeed, greater than that of any of its present hospitals; and to support the whole number of its insane in such establishments will require annually, at the rate of cost in its present hospitals (including interest on the buildings), over $1,000,000. The legislature of the State has recently passed an act providing for the establishment of a large asylum for the chronic insane.

OHIO.—The population of this State in 1860 was 2,339,511. The insane number at least 1 to 700 of the population, which may now be safely reckoned at 2,800,000, as the percentage of increase from 1850 to 1860 was 30 per cent. This gives 4000 total number of the insane in this State; whereas the United States census for 1860 gave but 2293. Of these, there are at

Longview Asylum	585
Northern Lunatic Asylum	149
Southern " "	178
Central " "	330
Total	1242

This will leave 2758 to be provided for elsewhere. During the past year, a Committee of the Ohio State Medical Society, consisting of Drs. Pearce and Brown, made a report to the Society respecting the number and condition of the chronic insane in county infirmaries and jails throughout the State. They state the total number reported, at 857 incurable cases thus confined; 288 of whom are closely imprisoned; 55 shackled; 32 in county jails; 9 supported by friends; and 36 by townships. In accordance with instructions from the Society, the same Committee petitioned the legislature for the establishment of a "State Lunatic Asylum for Incurables."

The Committee also state: "They are satisfied the whole number of chronic incurable insane in Ohio is over one thousand, and constantly increasing." They also report that too little attention is paid to the separation of the sexes. Some of them are habitually nude, others nearly so; that, in many instances, there is filthiness of person and apartments, neglect of ventilation, absence of all medical and hygienic treatment and moral influences, which their disease requires. That, in some of the infirmaries and jails, in at least three counties, physical suffering is inflicted by *a raw-hide, rod,* or *shower-bath,* etc." In Ohio, as in New York and other States, under the operation of its lunacy laws, the more recent

cases of insanity receive care and treatment in the hospitals for the insane, while the chronic, and so-called *incurable* cases find their way to the county infirmaries and jails, where, neglected and abused, their cases, if not already hopeless, generally become so from the treatment they receive. Thus the separation of the recent and chronic insane is fully established by the operation of the lunacy laws of Ohio, as well as New York and the other States, the incurable flowing constantly into the almshouses and jails.

To provide for these 2750 poor insane of the State, at present unprovided for outside of the almshouses and jails, the last legislature of the State authorized and made provision for the building of a new asylum at Athens, and for the enlargement of the other asylums of the State. When these additions shall have been completed, the increase of capacity will be about 1000, still leaving over 1700 to be provided for, with a gradually accumulating increase. If all the insane of Ohio are to be cared for in hospitals similar to those now in operation, the annual expense to the State will not fall short of $400,000, independent of the cost of the buildings, a sum equal to more than one-fourth of the whole amount levied in the State for taxes, for all *State purposes*, in the year 1860. A large deduction may, of course, be made from this amount, inasmuch as, under any system of provision, large numbers of insane will always be provided for at their homes.

KENTUCKY.—It was stated at the last meeting of the Superintendents of Insane Hospitals, that Kentucky will soon provide for all her insane, agreeably to the views of the Association. This State had a population in 1860 of 1,155,689, including the blacks. The movement of its population decennially was over 30 per cent. from 1850 to 1860; but deducting 5 per cent. for the war, and calling the increase only 12 per cent. for the last seven years, we have the present population of the State 1,294,371, and reckoning the insane as 1 to 1000, we have 1294 as the total number of its lunatics (the U. S. Census for 1860 gives 539 as the total number).

Present Provision for the Insane in Kentucky.

	Patients.
Western Lunatic Asylum	253
Eastern Lunatic Asylum	258
Total	511
Whole number	1294

Leaving a balance of 783 insane in Kentucky still left unprovided for; being a larger number than are now taken care of in its two asylums.

IOWA.—Iowa, though not a quarter of a century old, has a population of 1,369,000, with an insane population of 1700. It has just constructed the largest, and, as is stated, the most elegant and commodious lunatic hospital in the Union. It is located at Mount Pleasant, Henry County. Its central structure, 90 by 60 feet, is four stories high; the six wings, forming a quadrangle, are three stories; it is built of cut stone lined with brick, has an iron roof, and eleven miles of iron pipes for water, gas, and heating. It has 425 rooms above the basement, 900 doors, and 1100 windows. It has cost $600,000, including an Artesian well 2100 feet deep, the water unfit for use. Allowing it has accommodations for 500 patients, there must be over 1200 remaining in the State without any provision. The annual interest on the cost of the building is $42,000; per capita for each of the 500 patients $84.00; this makes the annual cost of support of each patient in the Institution at $5.50 per week, $370 yearly, or a total of $185,000; and if all the insane in the State are to be supported in like manner, the total annual cost will be $300,000.

WISCONSIN, with a population of over 1,000,000 and an insane population of at least 1600, has but one lunatic asylum at Madison, with 180 patients, leaving over 1400 unprovided for.

MICHIGAN, with 1,300,000 population, and 1856 insane, has but one asylum at Kalamazoo, with 172 patients, leaving 1684 uncared for.

THE STATE OF NEW JERSEY has, at present, a population of 840,000, with from 1200 to 1400 insane; with only one institution for their care, viz, the State Hospital at Trenton, with 450 patients; leaving some 800 or 900 insane unprovided for.

THE STATE OF INDIANA, with a present population of 1,688,000, has 2411 insane, with only one institution for their reception, viz., the State Asylum at Indianapolis, with 273 patients; leaving 2138 unprovided for, except in poor-houses and jails.

THE STATE OF ILLINOIS in 1860 had a total population of 1,711,-900, and the ratio of increase for the decade from 1850–60, was over 100 per cent. It must now have a population at the same rate, of 2,910,000, and an insane population of 2910 (1 to 1000 population), with only one lunatic asylum, at Jacksonville, containing 318 patients, leaving 2592 lunatics to be cared for in jails and almshouses.

As the subject of provision for the chronic insane will be amply, and, no doubt, ably discussed by Dr. Chapin, the writer of this report does not deem it necessary to consider the subject at greater length here. But there is one very strong argument against the erection of large establishments for the insane which it is proper to mention here and that is, the effect of distance in diminishing the practical benefits of lunatic hospitals to the people of any district. This has been demonstrated by statistics collected with great care by Dr. Jarvis, of Massachusetts, and published in the twenty-second volume of the *American Journal of Insanity* (January, 1866). He shows that facilities of travel, navigable rivers, canals, railroads, public highways, and public conveyances, which render communication easy and cheap, and intercourse familiar and virtually diminish distance from the hospital, *increase the ratio of patients sent to it;* so that those counties which have the greatest facilities for getting to the hospital, send more patients to them than other counties of equal population and at equal distances, but not favored with these facilities of communication. This plan of sending our insane in the State of New York to the great State Institution at Utica, has been found to be very unequal and unjust in its operation; the towns in the neighborhood of the State asylum having enjoyed more than four times as much of its benefits as the remote towns, and the same is true of all other large lunatic hospitals in other States. Although *general* in their design and aim, they are, necessarily, *local* in their operation. This law of nearness, inviting and increasing the patients, and of distance, preventing them and diminishing the number in hospital, must continue to operate in the future as it has in the past. What then is the remedy for this evil? Evidently, *the creation of smaller local asylums,* in the midst of the people who are to use them. Let three or four counties of moderate size unite in the erection of a central *hospital for cure,* sufficiently large to accommodate from fifty to one hundred acute, curable cases, with suitable farm-buildings in the neighborhood for the reception of the chronic quiet cases; where, un-

der the same supervision, and with proper attendants, they may enjoy the freedom of out-door life. A population of 100,000 will give at least 100 lunatics; 200,000 will give 200; probably an asylum for 250,000 will be about the proper size, and that would accommodate 250, which is thought to be as large as is expedient, and if the legislatures of the different States wish to avoid this unequal division, and distribute the public bounties equally to all sections of the State, this plan of moderate-sized asylums is the only method by which such result can be secured.

The value of the farm products from the labor of the insane in our asylums is very small, often none at all, as will appear from the following statement:—

Massachusetts General Hospital, Northampton (1867).

Value of products	$8,602
Expenditures	91,099

Massachusetts Hospital for Insane, Taunton (1866).

Value of products	700
Expenditures	67,000

Massachusetts State Asylum, Worcester (1866).

Value of products of farm	13,000
Expenditures	87,000

Connecticut Retreat (1866).

Farm products	none.
Expenditures	72,000

New York State Asylum, Utica (1866).

Value of farm products	13,000
Expenditures	87,000

Pennsylvania Hospital for Insane (1867).

Value of farm products	none.
Expenditures	76,000

Eastern Lunatic Asylum, Kentucky (1867).

Farm products	1,000
Expenditures	52,000

The Vermont Asylum for the Insane is self-sustaining. The income from the farm products and the board of patients being more than sufficient to pay all expenses. In 1866, 641 patients enjoyed the benefits of the asylum.

In conclusion, your Committee, in view of the above facts, feel justified in drawing the following conclusions:—

To prevent any great further increase of the burden which

lunacy imposes upon the country, providing this can be done without injury to the insane, would be a laudable aim.

Insanity is on the increase in the United States, especially among the middle and lower classes, and more public provision is imperatively demanded for them in all the States.

As more persons annually become insane than are removed from it by death, recovery, or any other cause, there must necessarily be an accumulation and disproportionate increase of them to the population, and any system of caring for this class satisfactorily, must be defective, which does not take this fact into consideration.

The present plan of providing for all our insane in large establishments as expensive as the average of those already built, costing originally over $1000 *per capita*, and nearly $300 *per annum*, for the support of each patient, is unwise, and utterly impracticable as a general measure.

It is, therefore, absolutely necessary to find some other channel into which the chronic and incurable cases can be diverted, so as to keep down the number of patients now maintained at such high rates in lunatic asylums, and avoid what is otherwise sure to happen, viz., a constantly recurring need of an increase of asylum accommodation.

It is worthy of serious inquiry whether a partial receptacle for this constant overflow cannot, probably, be most easily or properly found in a transference of a portion of such patients to *private dwellings*, as now successfully practised in Scotland, and for more than eight centuries at Gheel, in Belgium, a plan which the most distinguished alienists at home and abroad believe to be best for the patients and best for the country.

Hospitals for the insane should be assigned chiefly for *curative purposes*. Spacious, cheerful, well warmed, well lighted, well ventilated, and furnished with every convenience and facility which experience has demonstrated to be useful in the restoration of mental and bodily health.

Such hospitals should have a capacity of accommodating not exceeding one hundred acute, curable cases, while there should be accessory to, and connected with them, under the same general supervision, an *agricultural colony*, with plain, substantial, inexpensive, but every way comfortable farm buildings, adapted in all respects to promote the health and well-being of their occupants.

This "colony" may embrace from three to five hundred patients, if sufficient land be provided, one acre for each patient; but the

dwellings should be distributed in sections or clusters, so as not to congregate any large number together; and each section should have its own superintendent and director, with such assistant overseers as may be necessary.

The two departments, the *hospital proper* and the *agricultural colony*, will be supplementary to each other. When patients are sufficiently restored in the hospital, they should be transferred to the farm-houses; and when there occurs an aggravation of the symptoms, or a return of the mental malady supervenes, the patient should be again removed to the hospital proper; and this will prove a constant incentive, not only to self-control and sane conduct on the part of the acute cases, but also on the part of the chronic patients, lest by violent outbreaks or insane behavior, they again lose their liberty, and be consigned to the wards or cells of the hospital; for it is well known that the insane have, to a good degree, the power of self-control, if a sufficient motive be placed before them. *Mechanic workshops*, well supplied with necessary tools, should be supplied to the colony, for the use of patients during such seasons as out-door labor is impossible.

Insane hospitals should, if possible, be of such size, and so located that the relations between the patients and their friends may be easily maintained.

As some of the insane are as well, or even better off at home than in asylums, your Committee would recommend that the State, instead of supporting all such patients in a public asylum, make a weekly allowance of two to three dollars to poor families so situated as to be able to take charge of them.

In cases where, from delusion or idiosyncrasy, a removal from home is rendered expedient, it is advised that the insane should sometimes be boarded in other suitable families, if such can be found, to the number of three or four in each family, at the expense of the State, where they may be encouraged to labor daily, but always under proper supervision.[1]

The harmless insane are equally entitled to their liberty as the sane.

Your Committee find that:—

Of recent cases of insanity treated in our lunatic hospitals, about sixty to seventy per cent. are cured; of all cases received, about forty per cent.

[1] These last two recommendations are also made in the last report of the Massachusetts Board of State Charities.

Our *hospital statistics of insanity* are too generally crude and imperfectly kept, the *admissions* or *cases* being far more numerous than the *persons*. At one institution, according to Dr. Earle,[1] of 2308 admissions, there were but 1841 persons. The number admitted twice, each, was 280; thrice, each, 81; four times, each, 33; five times, each, 18; thus the number diminishing, till it ends with one patient who was admitted twenty-two times, and discharged cured every time. In all cases, record should be kept of the repetition of admission or discharge of patients, otherwise the statistics are valueless.

Intemperance is the most prolific cause of insanity in the United States; and whatsoever tends to diminish intemperance, reduces indirectly the number of the insane. Inebriate asylums should be created by all the States, as receptacles for this class, as well as those who wish to reform.

Insane convicts should have special institutions erected for their reception, and should never be received at the ordinary public institutions.

Pauper lunatics should never be assigned to almshouses, but always have provided for them separate asylums, suited to their condition and wants, where the curable may be restored, and the incurable be properly and comfortably kept.

All laws ordering the creation of county receptacles for the insane should be repealed, and the counties be relieved of the responsibility of providing for the wants of the State.

All the laws, both civil and criminal, in respect to insanity, the insane, and lunatic hospitals, should be revised, and reduced to a code more suitable to the advanced civilization, the wants, and necessities of our population.

Classification, in most of our hospitals, is not carried sufficiently far. There ought to be, as they are now organized, not less than *eight different classes* for each sex in every asylum; besides a distinct department for the *epileptic* and *insane convalescents*.

In most of our hospitals the medical staff is too small, and *there is not a sufficiently minute and constant supervision;* nor is it properly systematized or persistently carried out. Efficient, conscientious, resident officers must always be the first great reliance; and after them supervisors and companions, whose duties are constantly wherever the patients are, to see that the attendants perform their

[1] Preliminary Report on the Eighth Census, 1860.

duties properly, and use the kindest treatment to those under their care.

Finally, your Committee deem it no more than an act of justice to "THE ASSOCIATION OF MEDICAL SUPERINTENDENTS OF AMERICAN INSTITUTIONS FOR THE INSANE," to acknowledge the great and invaluable services which they have rendered the cause of science and humanity, since their organization in 1844; especially, their important influence in establishing new hospitals; in fixing the principles which should govern legislative and other bodies in regard to their construction, organization, and general management; in short, their uniform faithfulness and devotion to promote the best interests of the insane in America.

In behalf of the Committee.

CHARLES ALFRED LEE.

PEEKSKILL, May 1, 1868.

REPORT

ON

PROVISION FOR THE CHRONIC INSANE.

REPORT ON PROVISION FOR THE CHRONIC INSANE.

THE *résumé* of the history and present condition of psychological medicine, presented at the last meeting of this Association by the Section we now have the honor to represent, exhibited gratifying evidence of the progress of this department of medicine. It was exceedingly becoming that the distinguished gentleman who has done so much to adorn the literature of his profession, and who has participated for many years in professional duties incident to the charge of an asylum for the insane, should, at the conclusion of his active service, from his impartial stand-point, survey this field of medical research. His efforts, with those of numerous members of our profession, have identified it with the comparatively improved condition of the insane, and enlightened the public as to its obligations toward this unfortunate class by demonstrating the fact that a certain proportion of cases recover under appropriate care and treatment.

Insanity is one of the expressions of the infirmity of human nature, and may be expected to occur in a certain ratio in every community. Its occurrence has not, however, been anticipated in any instance by proper preparation, but provision for it has invariably been deferred until the demand has become pressing, and until the condition and neglect of the insane have been regarded such a public scandal that their claims could not with decency be longer ignored.

It is a part of the history of provision for the insane in this country that the earlier efforts in this direction were prompted by a desire to afford an asylum, or retreat, for the dangerous class, or such friendless and indigent insane persons as were found in jails, almshouses, and other improper receptacles. Official reports of commissions, inquiries set on foot by medical societies, or individuals, have brought to light the wretchedness, habitual neglect, and abuse which prevailed in these abodes, which have been, in every in-

stance of the erection of a new asylum, the basis and burden of the appeal for legislative or benevolent aid. An examination of these reports, and the memorials that have grown out of them, will enable us to come to no other conclusion than that the object, directly sought, was the removal of the insane from the influences and privations of the poor-house, and other improper places, where they were found. Undoubtedly, the legislatures which made appropriations, upon the representations presented, have reasonably anticipated that the relief, so far as it could be made to extend, would apply first to those whose long suffering and neglect entitled them, if they had any claim, to prior consideration.

It has appeared, however, that the relief afforded to the class of the insane confined in the poor-houses, by the opening of an asylum, is usually exceedingly limited; that the number remaining in the poor-houses, and sometimes in the jails, has continued unchanged; and that even the very class in whose behalf so much sympathy was invoked has been actually discriminated against in the legislation organizing the newly-created institution.

Several circumstances have conspired to bring about this state of things. It is a well-known fact, however commendable a proposition or an institution may be, that, in the expenditure of public money to carry it out, a variety of new interests, personal, political, and pecuniary, in no way relating to the end in view, often enter into the prosecution of it to influence and shape it. In this manner, extravagance of management and an utter failure to appreciate the intentions and plans of the founders of a great and good work, may bring about destruction of public confidence and paralyze all subsequent endeavors in the same direction for years. Then, again, if we are able to infer what were the views of the early advocates of reform in the care of the insane, in this country, they did not contemplate their removal from the noisome poor-houses and jails to asylums, where they were to remain for a brief period, and, when pronounced incurable, or the disease had assumed a chronic and harmless character, to be returned whence they came. The change and improvement looked to permanence. The asylum was to become for the insane what its name imports, a home. Yet, if we follow the course of legislation, and, we may say, of professional opinion, upon this subject, it will appear the tendency has been to regard institutions for the insane solely as hospitals or curative establishments. The asylum for the insane has come to be regarded in the public mind a temporary place of

abode for medical treatment alone, and not as a retreat or home. The legislation regarding the admission of patients has been framed to give preference to recent cases, to defer and exclude the chronic, and discharge those deemed incurable. The administration of these laws, so far as they pertain to the care and disposition of the insane poor, devolves upon certain county officials, who often allow their economical propensities to overbalance the humane discharge of their duty. The laws of some of the States also vest a discretionary power in county officers of sending the insane poor to an asylum or a poor-house; and in the officers of an asylum, of returning patients to the poor-houses as incurable. Thus the statutes, in their practical operation, discriminate against a class of the insane whom we prefer to designate as the chronic insane, *not necessarily incurable*—the class most deserving the intelligent consideration of the profession because the most suffering, friendless, and helpless.

The result in all the populous States is quite uniform. The sentiment of the community conforms itself gradually to its written statutes, and the long-continued practice of returning the insane poor to the infirmaries and poor-houses has confirmed the public mind in the belief that, after a trial has been made at an asylum, it has discharged its whole duty in this relation. The poor-house becomes the final legalized receptacle of the friendless and penniless lunatic. It receives its yearly increment from the community directly, and indirectly from the asylums, until the insane department becomes a part of the pauper establishment of the county. A few of the insane, comparatively, are provided for in asylums, but the large proportion wear out a miserable existence in the poor-houses.

According to our observation of the tendency of public opinion upon the question of provision for the insane, the insane poor particularly, we express the conviction that it has been, until a recent period, in a retrograde direction, and unfavorable to their interests. The reasons for this we have already briefly alluded to, and recapitulate them.

1. Legislation discriminating against the chronic insane poor.

2. Legalization of poor-houses, infirmaries, etc., as proper places for the care of the insane, both in the acute and chronic stage of the disease; and, the return of the insane as incurable from the asylums, thus forcing upon county officials the care of their insane, and entrenching the system by established usage.

3. The tendency of the profession to regard an asylum as a hospital for the *cure* of insanity, and not as a retreat or home.

4. The tendency to erect buildings on a scale beyond the means and willingness of the public to provide, and too expensive to provide for all at the same rate.

In presenting this report, the object the Committee have in view is to press upon the attention of this body the claims of that portion of the insane not directly comprehended in the scheme of asylum relief. We also present some suggestions, which, if reflected upon in the spirit in which they are offered, will, in our opinion, materially mitigate the existing evil, and give us, when carried out, what we have not now, a comprehensive system of caring for all classes of our insane. These suggestions apply in principle to all conditions of the insane, but particularly to the indigent class. The insane poor, by reason of their destitute circumstances, fall upon the public charge; and their present wretched, unsatisfactory condition, together with the fact that their number is rapidly increasing, renders the question of their proper care one of growing importance. The first step in this direction should be the enactment of laws in accordance with the just rights of all classes of the insane. The claim of every insane person, whether in the acute or chronic stage of the disease, to the treatment and care his condition demands, should be recognized. The State should assume the guardianship of all insane persons who, by reason of indigence or crime, are thrown upon the public charge, so far as to prescribe the conditions under which they should be cared for, and exercise surveillance over them as wards. The practice of sending the insane to poor-houses, infirmaries, and jails, and of returning them to such places from the asylum with "the stigma of incurability" upon them, should be illegalized and abandoned. The law should plainly direct the legal custodian of the insane person, on the fact of insanity and indigence being established, to convey such individual to the State asylum. From the asylum a discharge should not be granted until restoration takes place, or until it may be made under circumstances which we will point out hereafter.

The asylums should be held to their originally designed purpose of affording, in addition to means of treatment, a retreat, or home, for those whose condition renders their discharge and residence elsewhere unadvisable. As one result of discharging patients as incurable has been to depreciate the value of asylums in the public mind, so the retention of chronic cases would tend to their appre-

ciation. Statutes framed to insure the right of the neglected class to proper care could have but one result, the advancement and elevation of public opinion. Under this policy the existing institutions would rapidly fill up, but, in the end, we would witness the appreciation of the necessity of additional establishments, and their multiplication to meet the demand would follow in course. The asylums would present a diminished number of recoveries in their annual reports, which is always exceedingly encouraging to the medical staff, but their labor would not be less worthily, less honorably or usefully employed, in endeavoring to ameliorate and render more tolerable the condition of chronic insanity, which would fall so largely to their lot to deal with.

The propositions which we have presented are so just that we believe they will commend themselves favorably to every right-minded citizen; are so humane as to meet the demands of every philanthropist; and will be found on examination to be in strict accordance with the views of the political economist.

Any change will be regarded as an innovation, and that it will be accepted without objection is not to be expected. Adherence to the traditions of the past, and established usage; adhesion to dogmatic propositions; a tyranny of professional opinion which would fetter all inquiry; combine to prevent an impartial and fair examination of this subject. We submit, however, that in the light of the experience before us, the question of future provision for the insane, particularly the chronic insane, is a legitimate one for continued investigation. It is a proper question to be brought, not only before the entire profession, but the public, who as tax-payers must be relied upon to carry out what is proposed.

The adoption of these propositions would lead to a departure from the principles which now govern the construction of our asylums for the insane. This change would become necessary to adapt them to the care of the harmless and quiet insane, and such other patients whose condition would render their discharge unadvisable.

According to the investigations of Dr. Jarvis, the annual expectancy of insanity in Massachusetts is one in every seventeen hundred of population. The expectancy of results, based upon the treatment of several thousands of patients treated in American asylums, is, that of every one hundred admitted, forty-two will recover, eight will die, and fifty be discharged improved and unimproved. Twenty-one of the forty-two will have a subsequent attack, with its

varying results. If for the care and treatment of the various conditions these cases present, restraint to one building, with its classifications, is all that is to be sought in the plan of an asylum, there is perhaps little to be desired beyond the models already presented for imitation. In all established institutions, classification is justly regarded as one of the important elements of moral treatment. The principle which governs classification is the measure of self-control the individual possesses, and the mutual reaction of associated patients. Every consideration must also be made subservient to the preservation of a certain amount of order, quiet, and discipline, especially in a large institution. Hence, it will be found that the principle of classification, practically applied, separates the excited and noisy patients from the quiet and orderly, irrespective of the nature or duration of the disease. A government, always intended to be mild and firm, pervades the entire household, which constitutes the discipline of the asylum. To the theory of government established, all must conform, and as the number swells, that maxim comes to be practised which inculcates the greatest good to the largest number. The greater the number of persons congregated together under one roof, the more unbending the discipline necessarily becomes. The individual is merged in the mass. On the other hand, small numbers relax discipline, and develop individuality.

It is a well-known fact, that in the material world morbific matter may exist, and yet be so diluted by counteracting causes as to render it inert. When, however, it finds a nidus, or its relative proportion to surrounding hygienic circumstances is disturbed, its action is intensified, and it expends itself with increased force. No medical director of an army would think of congregating all the cases that come under the care of his department. While he organizes a system to embrace all, care will be exercised that separation and even isolation of diseases is rigorously preserved. The tendency of diseases to react upon each other is well known, and the separation is enjoined in obedience to this law.

Mental diseases afford no exception to this experience. The tendency of different temperaments, morbidly affected, to react unfavorably, and even intensify the morbid element, must be acknowledged. That a case of acute mania, with constitutional disturbance and delirium, derives any advantage from being "classified" with a number of others in the same condition, may be believed, because necessity compels the arrangement, but will not be accepted as an original proposition.

In every asylum are to be found, also, a number of patients who, having passed through the acute stage of an attack of insanity, emerge with mental powers impaired. They are partially demented, or exhibit such obliquities and delusions as to render them dangerous or improper persons to be discharged. They possess a certain amount of self-control which is compatible with their stay upon a quiet hall. While some among them are conservators of the good order of the house, others are querulous and restless. Retaining a certain amount of ill-directed mental activity, unpleasant recollections of persons and things associated with the early management of their case, they ultimately become fit subjects for heroes of writers of sensational literature. The necessities of our present asylum plan compel the association of this class together, with which must also be classified such recent cases of partial alienation as are received for treatment.

The monotony of the life of the insane, especially of the chronic insane, is a matter of painful experience. It is the offspring of idleness and want of occupation. It is the tedium of asylum life. The domestic occupations of females present them more pleasantly to the visitor of an asylum. But who has not experienced the painful impression which the listless inactivity of a large asylum produces.

Every plan for the relief and care of the insane should be comprehensive, and include all conditions of insanity, more especially the chronic insane poor usually sent directly or indirectly to the poor-houses.

Under every roof of an asylum are to be found two classes, representing, in their excitement and mildness, opposite stages of disease. Between these extremes are numbers in variable conditions. That the excited, the paroxysmal, and the feeble need such restraint as the usual plan of an asylum building affords, will not be questioned. This portion would not, ordinarily, exceed one-third or one-half the population of an asylum organized upon existing plans. The remainder would embrace the large number for whom we would propose to substitute the custodial care of an auxiliary organization, for the restraint and discipline of the asylum. For the care and treatment of those cases requiring restraint and immediate medical attention and inspection, a building of proportions much reduced below the usual standard would answer every requirement. Ample facilities for classification should be provided

in this building, which, for convenience, may be designated the hospital. Special means for treating acute cases, by excluding some of the injurious influences which a promiscuous association is believed to exert in certain instances, should also be provided.

An auxiliary organization, or organization supplementary to the hospital, should comprise arrangements for the custodial care of the quiet, harmless, and manageable insane, mostly of the chronic class. Two-thirds of all the insane are of this class. This organization should be in the nature of a colony made up of detached buildings for both sexes, having the relation of contiguity to the hospital. It would supplement the hospital by affording more extensive facilities for classification. While the hospital building would furnish the extreme of restraint, the colony organization would reduce it to the simplest form of surveillance. The colony should be composed of several buildings which might be located with reference to the various employments incident to a large establishment as the cultivation of fruit and the garden, the farm, the care of stock, and certain mechanical operations. Among the chronic insane are to be found a large number who possess, notwithstanding the mental impairment, physical strength unimpaired. They are capable under the direction of judicious influences of performing the usual manual labor of a farm. The physical strength remains, but the force of the will to direct is impaired. A certain proportión are feeble mentally and physically, but, susceptible to the impressions of surrounding circumstances.

Of the different forms of occupation, not any contributes so much, in its variety and its results, to contentment and healthful diversion as farm labor. Under the influence of regular employment, the monotony and idleness which render the life of the insane so intolerable, and so often finds expression in fitful outbursts of violence, will disappear. As a remedial measure out-of-door occupation is invaluable, and, in this way we can explain the reported recoveries of patients in the poor-houses after they have been discharged as incurable from an asylum. As the connection of a large farm, with well-organized departments of labor, would afford ample employment for males, so the various domestic indoor avocations which females could follow would be encouraged.

The proximity of the hospital would permit transfers and new classifications to be made without inconvenience, as the varying condition of patients might demand.

No opinion is expressed as to the exact number that should be accommodated in the hospital building and colony organization. This should be left to actual experience in every case to determine, believing, as we do, it would result in favor of reducing the hospital building and expanding the auxiliary organization.

It is essential the buildings of an asylum should be on such a moderate scale of expenditure as not to preclude the creation of additional establishments: and that the expense of maintenance should be so reasonable as to meet the approval of county and State officials, and not encounter their criticism and objections.

There is no doubt the great expense attending the erection of our asylums for the insane has proved the greatest embarrassment to their multiplication. It was usual to estimate the cost at one thousand dollars per bed, before the present enhanced price of labor and material. To meet the present condition of things at least fifty per cent. should be added to this estimate. If, for instance, a State with the population of New York were to determine to place all its insane in asylums, upon plans usually adopted, the sum of $6,000,000 at least would be required. Provision would still be necessary to meet the annual expectancy. What prospect there is that any populous State will accomplish the result of placing all its insane in asylums, they can best answer who labor with legislatures to secure the moderate sums yearly asked for repairs and improvements of buildings already erected. No State, at home or abroad, has yet been able to place all its insane in asylums on the present plans, and never will be able to do so unless great concessions are made in this respect. The plan of an asylum, which the Committee recommend, aside from meeting better in their judgment the actual wants and condition of the insane, possesses the additional advantage of greater economy in the erection of buildings. The question of economy of construction not only enters very largely into this matter, but that of cost of support. It will probably occur that where the expense of weekly maintenance in the asylum is greatest, that the insane supported by towns will be more generally neglected: the poor-houses contain the greatest number, and the State more reluctant to enlarge asylum accommodation. Not so much for the purpose of instituting a comparison as of presenting facts necessary to an intelligent understanding of this question we give the average weekly cost of support in seve-

ral asylums lying in adjacent States taken from the last accessible reports, viz :—

State Asylum,	Taunton,	Massachusetts,	per	week	. .	$3 39
" "	Northampton	"	"	"	. .	3 64
" "	Worcester	"	"	"	. .	3 97
" "	Harrisburg,	Penn.	"	"	. .	4 05
" "	Trenton,	N. J.	"	"	. .	4 42
" "	Utica,	N. Y.	"	"	. .	5 09

The cost of supporting paupers in the State almshouses of Massachusetts is $1.48 per week, while in the State of New York it does not, perhaps, exceed $1.00. It would appear, accordingly, from these statistics, the views of those officers administering relief to the insane in our asylums and poor-houses are widely apart.

The importance of regular and variable occupation is conceded by all who have had experience with the insane. Of the value of the labor of the chronic insane, doubtless, different opinions prevail. Three-fifths of them are able and willing to labor more or less. Under an improved organization the number would increase, and with it the avails of the labor. There could be no objection certainly to appropriating these avails toward reducing the cost of support, as far as they would go.

For the proper development of any regular system of labor in connection with an asylum, at least five hundred acres of land to every seven hundred patients are requisite. We should confidently expect under this system a reduction of one dollar per week at least below the present average cost of support.

To what extent certain public patients may be cared for at their own homes, by extending moderate aid to their families, is a proper question for examination. In England, Scotland, and in Massachusetts it is supposed fifteen per cent. of the chronic insane may thus be cared for. Such persons, as well as all public institutions for the insane, should be under the supervision of an efficient board of control with powers and duties analogous to the Board of State Charities of Massachusetts.

In the examination of a subject, such as has been confided to your Committee, they are aware, as a rule, it is easier to point out defects than suggest remedies. To express the opinion there are defects in the present system of caring for the insane is not to be received, however, as a confession that we have so far been pursuing a wrong policy and that all has been in vain. To be aware of existing defects, and admit the proposition they are to be ignored or

concealed, would, on the other hand, forever prove a bar to change or progress.

In presenting to this Association the suggestions contained in this report, the Committee have done so with due regard and respect for the opinions of those who may dissent, yet in the confident conviction they solve the problem of the proper disposition of the chronic insane poor. The plan which is presented has the merit of actual and successful demonstration abroad. It aims at the segregation, not the aggregation, of the insane; increased personal liberty; greater economy of expenditure in the erection of buildings; and a reduction in the cost of support. In this direction all progress and improvement should tend, whatever may be the actual means employed.

JOHN B. CHAPIN, M. D.

REPORT OF THE SECTION

ON

Meteorology, Medical Topography, and Epidemic Diseases.

REPORT OF THE SECTION

ON

METEOROLOGY, MEDICAL TOPOGRAPHY, AND EPIDEMIC DISEASES.

TUESDAY, May 5, 1868.

THE Section met in the basement-room of Carroll Hall, and was called to order by the President, Dr. B. N. CATLIN, of Connecticut.

The Secretary, Dr. N. S. DAVIS, of Illinois, read the minutes of the meetings of the Section at the previous annual meeting.

On motion the present officers were re-elected as President and Secretary for the ensuing year.

The Secretary read a letter from Dr. R. C. HAMILL, member of the Committee on Climatology and Epidemics, for Illinois, asking for a longer time to complete his report.

On motion, his request was granted.

Dr. E. A. HILDRETH, of West Virginia, member of the Committee on Climatology and Epidemics, read in full his report. It elicited an interesting discussion, which was participated in by Drs. E. HARRIS, of New York; T. ANTISELL, of District of Columbia; J. F. HIBBARD, of Indiana; EZRA M. HUNT, of New Jersey; after which the report was referred to the Committee of Publication.

Dr. THOS. ANTISELL, member of the Committee on Climatology, etc., for the District of Columbia, read his report in full. On motion of Dr. HARRIS, of New York, Dr. ANTISELL was requested to add to his report an analysis of the water used in the city of Washington.

A discussion followed, participated in by Drs. D. W. PRENTICE, E. HARRIS, of New York; J. F. HIBBERD, of Indiana; F. HOOPER, of Massachusetts; and ANTISELL, of District of Columbia; after

which the report of Dr. ANTISELL was referred to the Committee of Publication. The Section then adjourned until 3 o'clock P. M. on Wednesday.

WEDNESDAY, MAY 6, 1868.

The Section was called to order by the Chairman, and the Secretary read the minutes of the previous meeting.

A short paper, in reference to the advantages of Aiken, S. C., as a resort for consumptives, was read by the Secretary, and, on motion, referred back to its author, with a recommendation that he cause it to be published in some one of the medical periodicals.

Dr. N. S. DAVIS, of Illinois, read a paper on the influence of local causes over the prevalence of epidemic cholera and other bowel affections, with some microscopic examinations of the cholera dejections.

It was followed by a very interesting discussion, in which Drs. OHR, of Maryland; ANTISELL, of District of Columbia; HARRIS, of New York; C. A. LEE, of New York; HOOPER, of Massachusetts; R. R. MCILVAINE, of Ohio; and HUNT, of New Jersey, participated.

Dr. OHR moved that the paper read by Dr. DAVIS be referred to the Committee of Publication; but, on the special request of Dr. DAVIS, the motion was so modified as to authorize him to publish the paper in some medical periodical. He was requested to continue his investigations.

The report of Dr. T. J. HEARD, on the *Climatology and Epidemics of Texas*, was examined and presented to the Section by the Secretary, and, on motion, referred to the Committee of Publication.

The report of Dr. D. F. CONDIE, on the *Prevalent Diseases in Pennsylvania*, was presented in the same manner by the Secretary, and, on motion of Dr. C. A. LEE, was referred to the Committee of Publication.

Dr. N. L. NORTH, of New York, presented and read a short paper *On the Use of Disinfectants, for the Prevention of Scarlet Fever.*

The subject was discussed by Drs. GARRISH, of New York; HOOPER, of Conn.; and NORTH, of New York; after which the paper was referred to its author, with the request that he would cause its publication in some widely circulated medical periodical.

On motion, the Section adjourned.

THURSDAY, MAY 7, 1868.

The Section was called to order by the President Dr. CATLIN; and the Secretary read the minutes of the previous meeting.

Dr. LEE introduced to the Section Dr. J. C. PETERS, of New York, who gave an interesting account of the lines followed by cholera in spreading from India to other countries, illustrated with maps.

On motion, Dr. PETERS was requested to furnish a copy of his remarks, accompanied by a map or diagram, for publication in the *Transactions* of the Association.

Dr. E. HARRIS, of New York, presented a brief plan for procuring more brevity and uniformity of reports on Climatology and Epidemics, which the Secretary of the Section was requested to print and distribute to the members of the Committee on Climatology, etc.

Dr. W. F. THOMS, of New York, read his paper *on plans for systematizing the records of meteorological observations and prevalence of diseases, accompanied by diagrams.*

On motion, the paper of Dr. THOMS was referred to the Committee of Publication.

The Section recommended Dr. H. I. BOWDITCH, of Mass., as a member of the Committee on Climatology and Epidemics for Massachusetts, in place of Dr. A. C. GARRATT, resigned.

The Section appointed Dr. ELISHA HARRIS, of New York, a Special Committee to report at the next annual meeting of the Association, *On the Influence of Quarantine in preventing the Introduction of Diseases into the ports of the United States.*

The Section having completed its business, adjourned until the next annual meeting of the Association.

N. S. DAVIS, M. D.,
Secretary of Section.

REPORT

ON

TOPOGRAPHY, CLIMATOLOGY, AND EPIDEMIC DISEASES OF WEST VIRGINIA.

BY

E. A. HILDRETH, M. D.,

WHEELING, WEST VIRGINIA.

REPORT ON TOPOGRAPHY, CLIMATOLOGY, AND EPIDEMIC DISEASES OF WEST VIRGINIA.

YOUR Committee, in attempting the task of reporting "on the Topography, Climatology, and Epidemic Diseases of West Virginia," have used all the means within their reach, meagre as they are. With a view to obtain information we addressed a printed circular to physicians in nearly every county in the State, asking reports, and answers to interrogations, and have received but two or three replies. It must be remembered that our State is, so to speak, in its infancy.

Physicians practising in the rural districts (and these comprise three-fourths of the whole) are so occupied with their daily routine of practice, and their powers of physical endurance are so taxed, as to leave little leisure time for observing, and noting such facts, as ought to be embodied in this report. Whilst all of the older States have made a thorough geological survey by competent and experienced geologists, who, under the patronage and pay of the State, have executed full reports thereof, we have merely reports of several counties in the southeastern part of the State, by Professor W. B. Rogers.

The number of the present population of the State is purely conjectural. At the outbreak of the Rebellion in 1861, no portion of the country was more divided, and discordant, down to dissension, and separation of families; many went to the South, and never returned. During the war, and since, there has been a rapid and increasing influx of population and capital, a life, and vigorous growth, which will rapidly bring the State to maturity. Under late laws a correct system of "registration of births, marriages, and deaths" has been inaugurated; but its machinery has scarcely had time to move, much less to produce reliable results.

The State Medical Society is just one year of age.

The State of West Virginia presents an almost unexplored field to the climatologist, naturalist, geologist, mineralogist, botanist, schoolmaster, and missionary; more inviting and profitable than any other State in the Union.

There are many parts of West Virginia where its people have lived for the last forty years with every surrounding necessary to their comfort, perfectly satisfied with their situation; behind the present age of progress and improvement, and strongly opposed to the Yankee plan of pushing a railroad or turnpike through their farm, with a mistaken idea of improving it. Probably in consequence of this policy, in part, the people of West Virginia cannot boast of a single foot of railroad built by themselves, and but one or two turnpike roads. But a bright and glorious future is just dawning upon her, and she will, ere long, take her position among the first in wealth and population in the sisterhood of States.

The American Medical Association will please accept this apology, for the following report:—

The State of West Virginia was admitted into the Union 20th June, 1863, with a population, according to the Census of 1860, of 376,688.

Taking into account the changes since that period, her present population may fairly be estimated at 400,000.

The new State was formed from the western part of Virginia, and is divided into fifty-two counties; situated between latitude 37° 3′ and 40° 35′ north, longitude from 77° 41′ to 82° 45′ west.

Its area is 19,350,573 acres, or 30,235¼ square miles. Its boundaries are, on the east, Virginia and Maryland; the south, Kentucky and Virginia; the west, Ohio; the north, Maryland and Pennsylvania.

It is a hilly and mountainous country. The eastern line is along the western ridge of the Alleghany range, formed of the Cheat, Great Greenbrier, and Briory, and its southern by the Flat-top Mountains.

The general course of this range is northwest and southeast. West Virginia is the western declivity of this range of mountains; a great water-shed discharging into the Ohio River. Along the mountain tops are plateaus of many miles in extent, similar to the prairies in the west; descending towards the west are the "glades," extending at many points almost to the Ohio River; further south and west, running to the limits of the State, the mountain range becomes irregular and broken by the Kanawha River and its

branches, having apparently cut their way directly through the soft sand rock of which this range is mostly formed, showing a perpendicular face of from five hundred to one thousand feet, as at "Hawk's Nest', in Fayette County, on New River; along the Ohio valley to the northern limit, the hills present a sharp and abrupt outline, with short ranges seemingly abutting into each other.

The following measurements of altitude will convey a better idea of their position.

The elevations along the line of the Baltimore and Ohio Railroad above the sea level are[1]—

	Feet.
Ohio River at Moundsville	637
Cabin Point Tunnel	950
Fairmont	850
Tygart's Valley (within mt's)	1000
Kingwood Tunnel	1750
Summit	2620
Cheat River Valleys	1375
Blue Ridge near Harper's Ferry	1800
Across the southern portion of the State, Ohio River at Kentucky line	550
Kanawha River at Charleston	600
Mouth of Greenbrier River	1333
Plateau of White Sulphur Springs	2000

The greatest elevation is in Pocahontas County, being about 3000 feet.

GEOLOGY.—On this subject we can present a mere outline from Lyell's Elements:—

"The parallel zones of the Appalachians consist of strata folded into a succession of convex and concave flexures, subsequently laid open by denudation. The component rocks are of great thickness, all referable to the Silurian, Devonian, and Carboniferous formations.

"There is no principal or central axis, no nucleus to which all the minor ridges conform; but the chain consists of many nearly equal and parallel foldings, having what is termed an anticlinal and synclinal arrangement.

"Sometimes the whole assemblage of ridges runs perfectly straight for more than 50 miles, after which all of them wheel around altogether and take a new direction at an angle of 20 or 30 degrees to the first." "The important feature in the above section is the

[1] Surveys.

great coal field underlying the whole State and running towards the west, the various seams being laid open by the Monongahela, Ohio, and Kanawha Rivers cropping out along their banks and hillsides."

"The great limestone seam in the northwestern part lies below the coal measures, cropping out in the mountain sides. Interspersed with the coal measures are corresponding veins of iron ore of nearly all the varieties and forms of the hematite class found in the Alleghany range. These ores are found in strata pure or intermingled, ranging from one to four feet in thickness, yielding about 33 per cent. of iron. (H. Hagans.) The rocks along the Kanawha valley are chiefly sandstone of various qualities lying in strata or beds from two inches to several feet in thickness. These strata are nearly horizontal, but dipping to the northwest, imbedded in them, are four seams of coal above the water level within a vertical distance of 240 feet, the aggregate thickness of which is 17 feet."

The minerals to be found in West Virginia are, coal, iron, lead, copper, silver, antimony, nickel, lime, borax, alum, salt, and fire-clay. The whole State is underlaid with coal cropping out of the hill-sides and along the valleys and banks of nearly every creek and river in the State, appearing as if the water-courses had divided the mountains and hills from top to base, exposing their rich veins of coal, iron, limestone, etc., rendering their mining and transportation easy and cheap. *There is coal enough in West Virginia to pay the national debt, principal and interest.*

Prof. W. B. Rogers reports: "At Clarksburg and northward, down the valley of the Monongahela, there exists one of the richest coal deposits in the State; one of a the seams is from 10 to 12 feet thick, below which lie thinner strata of more highly bituminous character. In Hampshire County, upon a stratum of valuable iron ore not less than 15 feet in thickness, there rests a bed of sandstone, upon which reposes a coal seam 3 feet thick, above this another bed of sandstone, then a two feet vein of coal, then sandstone, then another coal seam of 4 feet; again a stratum of sandstone, and over it a seven feet vein of coal; over this a heavy bed of iron ore, and crowning the series an enormous coal seam of from 15 to 20 feet in thickness. On the Great Kanawha the exposure of coal is one of the most extensive and valuable anywhere in the United States." In this part of the State the hills and mountains, as you ascend the river from Charleston to Gauley Mountains,

present strata lying nearly level, of gray, brown, red, and white sandstone (the latter highly fossiliferous), clay slate, clay and sandy shales, iron ore and limestone; intermingled with these strata are seams of coal of the cannel, splint, and bituminous varieties, having an aggregate thickness of over 60 feet. A modern writer described the State in one word, when he said it was a *coal'd* country.

It would require a volume to describe the "oil region" lying in Ritchie, Wirt, and Wood Counties.

HYDROGRAPHY.—West Virginia abounds in rivers, creeks, and valleys; from either side of the mountain plains spring the fountain heads of most of the rivers—the great source being in Pocahontas and Randolph Counties, where the West Fork, Tygart's Valley, and Cheat Rivers unite to form the Monongahela. The general course of these rivers is north, along the valleys of the Alleghany Mountains. Describing a wide circuit through western Pennsylvania the Monongahela unites with the Alleghany to form the Ohio River. Next is the Little Kanawha, its main branches rising in Upshur and Randolph Counties, running southwest, emptying into the Ohio at Parkersburg. Looking to the southwestern part of the State are the Pocotalico, Coal, Elk, and Gauley Rivers, rising in the Great Flat-top Mountains in Roane, Raleigh, Randolph, and Pocahontas Counties, with New River taking its rise in North Carolina and Tennessee, all of which unite to form the Great Kanawha, and empty into the Ohio.

The Guyandotte and Big Sandy Rivers, both of whose headwaters interlock with the Clinch and Holston amid the spurs of the Cumberland Mountains, run a westerly course and discharge into the Ohio. "In their passage to the Ohio they traverse the most wild and picturesque region to be found in West Virginia; abounding in immense hills of sand rocks, cut into deep ravines by the water-courses, containing caverns of various sizes and extent. This region was formerly the most famous hunting-ground for bears in all the country. In 1805, 1806, and 1807, eight thousand skins were collected by hunters from this district. It was the paradise of bears, where, amid the forests of chestnuts and oaks, they found their food in exhaustless abundance."[1]

The Ohio River forms the entire western boundary of the State,

[1] Dr. S. P. Hildreth, Marietta, Ohio.

extending a distance of 253 miles. It has an average width of about 450 yards. It is the great commercial outlet, having direct communication with the Mississippi River, into which it empties, bearing on its placid bosom thousands of water-craft, from the floating palace of a thousand tons' burthen to the tiny skiff. Its fall, in the length of the State, is about two feet two inches per mile, and the rate of its current is from two to four and a half miles per hour.

Such is a general description of our rivers. Creeks, "forks," runs, and rivulets innumerable course over the face of the State. All of the rivers have from their source a rapid descent, assuming the character of torrents in passing through narrow defiles or rocky passes, until they reach, in the valleys below, more nearly the level of the Ohio, when they subside to quiet placid streams.

MEDICINAL WATERS.—The mineral springs of West Virginia are numerous and celebrated. We have blue, white, and red sulphur, salt, and salt sulphur springs; some of them are old places of resort for the sick, fashionable, nervous, and broken down—many and wonderful are the cures reported to have been wrought by their healing waters. A general account of the most noted may not be uninteresting.

The *White Sulphur*, of Greenbrier County, "is situated nine miles east of Lewisburg, six or eight miles from the top of the Alleghanies, on the western declivity, in an extensive valley embosomed with hills and mountains." "It was well known to the Indians as an important 'lick' for deer and elk." (*Howe's Hist.*) The following is an analysis of its waters. 100 cubic inches contain of solid matter 63.54 grains, composed of—

Sulphate of lime,	Peroxide of iron,
" magnesia,	Phosphate of lime,
Chloride of magnesia,	Sulphate and hydrate of sodium,
" sodium,	Precipitated sulphur, iodine, and organic matter.
" calcium,	

Temperature 62° Fahr.

The gaseous contents are—

Sulphuretted hydrogen,	Nitrogen,
Carbonic acid,	Oxygen.

"Its remedial virtues are applied to diseases of the liver, kidneys, digestive organs, rheumatism, scrofula, etc." (Prof. Rogers.)

The analysis of the *Blue Sulphur*, in the same county, is as follows:—

Sulphate of lime,	Chloride of calcium,
" magnesia,	Hydrosulphate of sodium and magnesium,
" soda,	Protosulphate of iron,
Carbonate of lime,	Iodine,
" magnesia,	Sulphur,
Chloride of magnesia,	Organic matter.
" sodium,	

Gaseous contents—

Carbonic acid,	Nitrogen,
Oxygen,	Sulphuretted hydrogen.

This spring furnishes fifteen gallons of water every minute—red, white, and black deposits are thrown down from its waters.

The *Red Sulphur Springs* are situated on Indian Creek, Monroe County. The water clear and cool—temperature 54° Fahr.—strongly charged with sulphuretted hydrogen and neutral salts. Its qualities are alterative, sedative, diuretic, diaphoretic, and anthelmintic.

The *Salt Sulphur Springs* are three miles from Union Village, Monroe County. In this vicinity are also the Sweet Sulphur and New Spring—the last contains a large portion of iodine. Temp. 49° to 56° Fahr. Analysis as follows:—

Gaseous Contents.	In 100 Cubic Inches.
Sulphuretted hydrogen	cubic inches, 1.10 to 1.50
Nitrogen	" 2.05
Oxygen	" 0.27
Carbonic acid	" 5.75
Solid Contents.	
Sulphate of lime	grains, 36.755
Sulphate of magnesia	" 7.883
Sulphate of soda	" 9.682
Carbonate of lime	" 4.445
Carbonate of magnesia	" 1.434
Chloride of magnesium	" 0.116
Chloride of sodium	" 0.683
Chloride of calcium	" 0.025
Peroxide of iron from protosulphate	" 0.042
An azotized organic matter, blended with sulphur	" 4.000
Earthy phosphates and iodine	a trace.

(Prof. W. B. Rogers.)

The *Sweet Sulphur* is also in Monroe County, temperature 73° Fahr. In a quart there are—

Carbonic acid Sulphate of magnesia Muriate of soda Muriate of lime Sulphate of lime	grains, 12 to 15.	Carbonate of magnesia Carbonate of lime Siliceous earth	grains, 18 to 24.
		Iron	½ to 1.

(Rouelle.)

The waters are used as a bath and drank, in dyspepsia, chronic diarrhœa and dysentery, uterine and nephritic complaints.

The mountain counties all have mineral springs, many of which are untried and unexamined—they may also be found along the Ohio River.

The "*Parkersburg Wells*," in Wood County, have some reputation; containing neutral salts, with carbonic acid and sulphuretted hydrogen gases.

Berkley Springs, in Morgan County, although the waters are but slightly impregnated with mineral ingredients, are in high repute for many diseases.

Shannondale Springs are in Jefferson County. Temperature 55° Fahr. 100 grains contain—

	Grains.		Grains.
Sulphate of lime . .	63.0	Muriate of magnesia .	1.0
Carbonate of lime . .	10.5	Sulphate of iron . .	0.3
Sulphate of magnesia .	23.5	Carbonate of iron . .	0.7

Gaseous contents—

Sulphuretted hydrogen, Carbonic acid.

(De Butts.)

It may be proper to insert here a general account of the *salt wells* of the State, found chiefly in Mason and Kanawha counties.

"The discovery of salt water in the latter county was by reason of a large 'buffalo lick' on the northeast side of Kanawha River, five miles above Charleston. The first well was sunk in 1809 in this 'lick,' known as the 'Big Lick.' Its salt waters were doubtless used by the Indians."

"The Kanawha Salt Works extend for about fifteen miles on both sides of the river above Charleston, giving employment to about 3000 persons, and yielding an annual product of about 1,200,000 bushels of salt. The salt water is obtained by boring at a depth of from 300 to 1000 feet below the bed of the river. The salt water in the wells invariably rises or falls to a level with the river, like the mercury in its tube."

"Connected with these 'fountains of strong brine,' and mingled with their waters, are 'fountains of inflammable gas,' sufficient to

pump it out in a constant stream, and then, by its combustion, to evaporate the whole into salt of the best quality." The gas is a mixture of carburetted and sulphuretted hydrogen, and is commonly found in the wells of about 1000 feet depth; yet it may be seen in many places bubbling up through the sand in the bottom of the river, and probably brings up the salt water with it, as in the gas wells, but in small quantity.

"The celebrated 'Burning Spring' is only one of its natural vents on dry land, the gas having forced its way from the rocks or coal bed below through seventy or eighty feet of alluvial earth to the surface. On applying a lighted torch, brilliant flames play and flash about over the surface of the water in a singular manner."

The same character of *burning springs* are found in other parts of the State, particularly in Wirt County, connected with the "oil or petroleum wells" of that region.

The salt wells of Mason County are principally along the banks of the Ohio River, yielding a similar quality of salt, with the same advantages of a seam of excellent coal cropping out in the adjacent hill-side, and used for evaporating the salt water.

Within my recollection, salt of a good quality was made from a well in North Wheeling; it was bored to a depth of 920 feet; although long since abandoned, it emits a stream of inflammable gas.

Soil and Productions.—The river bottoms of all the larger streams have a loamy soil, and yield rich returns to the husbandman; those along the Ohio River especially, having a width of from a few yards to two miles of level surface, are more easily cultivated, besides the facilities of transportation to market. It is a common practice, after the crops are gathered in the fall, for the old farmer and his sons to go to the woods, "get out" the timber, and construct their own "broad-horn," a flat-boat, and, loading it with their farm products, embark for Cincinnati, Louisville, or New Orleans, where they sell both boat and cargo.

Corn, wheat, rye, oats, timothy, and esculents, are common crops. We have known 142 bushels of corn taken off one acre of ground, and twenty to twenty-five bushels of wheat is a customary yield. Fruits grow to great perfection, such as apples, pears, peaches, grapes, and strawberries. Tobacco, flax, and hemp are plentiful. The table lands along the summit of the Alleghanies, comprising a narrow belt of perhaps an average width of twenty miles, and the plateau towards the interior of the State, having mostly a clayey

and calcareous soil, are quite fertile. A recent writer[1] thus describes this region. "In a mountainous and hilly country such as this is, the natural inference is, that it is rocky, barren, cold, and untillable. The very reverse of this is true; the entire surface, with very few exceptions, mountain-top and hill-top, sides, and valleys are covered with a fertile soil capable of productive cultivation. In many localities in which a field of level land is unknown, and all is abrupt and almost precipitous, there is no sign of a gully, or evidence of washing visible, or a swamp, or pool of stagnant water; even the bottom of the 'sinks' or 'devil's punch-bowls,' which are hopper-like depressions, are sometimes 50 or 100 feet in depth. Such a region is that of Monroe and Greenbrier, green with luxuriant herbage, or umbrageous with heavy forests, with a natural drainage scarcely improvable by art, and showing the great value of thorough drainage in the promotion of health of man and beast.

"Even the steepest hill-sides are smooth as lawn and as green. Rocks may diversify the landscape, as an exception, but, as a universal rule, they repose unseen beneath the surface, and never disfigure the view or arouse the spleen of the ploughman.

"The *forests* of the State are made up of sugar-maple, poplar, beech, oak, chestnut, cherry, hickory, walnut, ash, elm, and sycamore. In the mountain counties are several species of pines; along the southern part the chestnut flourishes. In the valleys are the locust (Robinia) and buckeye (Æsculus, O.). The dogwood (Cornus Florida) selects the uplands. There are laurel and hazel thickets on the mountains. The undergrowth of the forests consists of young hickory and oak, redbud, papaw (Anona, G.), witch-hazel, black, and dewberry, and wild grape-vines.

"Over two-thirds of the area of the State, as soon as the undergrowth of the forests is cleared out sufficiently to allow the sun's rays to strike the soil, blue grass and white clover are the natural growths, and in many fields sown in timothy, these natural grasses displace it.

"On the mountain plateaus and 'glades' a coarse succulent grass covers the ground, often several feet in height, affording pasturage frequently until the middle of December; when cut and dried it makes the best of hay. Formerly the cane (Arundinaria Macrosperma) grew along the banks of Big Sandy River; this is its extreme northern limit."

[1] I. R. Dodge. West Virginia, its Farms, Forests, etc.

This hasty sketch is designed to enumerate the chief native growths of our State as indicative of her climatology; a full description would make a volume.

INHABITANTS.—The first settlers of West Virginia came chiefly from Eastern Virginia and Maryland, and were mostly of Scotch, English, and Irish descent. They were industrious, sagacious, hospitable, hardy, and self-reliant; their purpose was to secure a goodly number of acres of land, although their facilities were quite limited for cultivating it; yet their rule was to make a "clearing" sufficient to supply their household wants with corn and vegetables, and as the forests abounded with bears, deer, and wild turkeys, they did not want for provision to supply themselves and leave enough for a rough but generous hospitality. They were liberal and social, and lived an independent contented life. Their corn-husking, apple-peeling, and log-rolling parties answered the double purpose of friendly intercourse and mutual assistance.

Their cabins usually consisted of a single room about 25 feet square, built of logs, "chinked and daubed," with a puncheon floor. With an enormous open fireplace on one side, opposite to which the beds were arranged next the wall, and a door on either side and half window for light, there was no want of ventilation. The large fire of wood afforded sufficient warmth and light for all domestic and social purposes.

Every family was supplied with a "hominy-block" and hand-mill to prepare their corn; the bolting-cloth was made of "deer-skin in the state of parchment, stretched over a hoop and perforated with a hot wire."

They tanned their own leather and buckskin, and made their moccasins and shoes. "Their clothing was all of domestic manufacture," wool and flax the material, and "linsey," the warmest and most substantial of cloths, supplied their clothing, and the women did the tailor-work.

In many portions of the State there are still to be found fair representatives of pioneer life, who look at modern innovation of early customs and habits with distrust and suspicion, and the confinement and discipline of the schoolmaster as a needless and useless curtailment of liberty; scarcely to be endured in comparison with the physical energy induced by an unconstrained and free use of their limbs in a hunter's life, so consonant with their feelings and habits. How much these innate ideas of independence and

freedom in its widest sense may have descended to the present generation would be difficult to determine, but, "Montani Semper Liberi" is the motto of the State of West Virginia.

About nineteen years ago a bill passed the legislature of Virginia authorizing the establishment of public schools in such counties as would vote a majority therefor; and among the counties of West Virginia, Ohio and Greenbrier, I think, were the only ones that accepted the law; but it affords great pleasure to state that, in the organization of the new State, a law was enacted for the establishment of public schools in every county and township in the State, and an abundant fund provided for their support and perpetuity. At this present writing, with a State but little over four years old, we have a system of common schools which will compare favorably with any other in the country.

The effect of the separation from Old Virginia, "whose malign influence has long rested like a nightmare upon this region, is easily seen by the stimulus given to industry and enterprise, the opening up of new channels of trade, the influx of population, and profitable investment of capital.

Sufficient has already been stated of the productions of the State to intimate that its inhabitants are good livers; besides the wild meats, hogs and cattle supply the best of corn-fed bacon and beef.

Every farmer expects to slaughter and cure sufficient hogs in the fall to last until the next season. Corn meal makes the universal bread, generally eaten in the shape of "Johnny cake" or "corn pone;" in many counties scarcely any wheat bread is used.

The present well-doing farmer has deserted the old log cabin of his ancestors, and built a commodious hewn log or framed and weather-boarded house, with enlarged and convenient out buildings. He usually has a good-sized family of industrious children, and, having few or none of his wants unsupplied, lives a contented and happy life.

There are two evils (and good seldom comes without), these are bad whiskey and tobacco.

The temperance reform has never abolished the decanter from the sideboard, and it is still a mark of friendship to tender a glass of whiskey-toddy or apple-jack.

A patch of tobacco is cultivated like corn, for family use; Virginia tobacco has a world-wide reputation. As these old habits and customs came from their ancestors down to the present genera-

tion, they are not likely to become changed, except by the influx of a preponderance of emigrants from other countries.

CLIMATE.—On an examination of the isothermal lines, it appears that the line of a mean temperature of 52° traverses about the centre of the State; whilst the line of 55° passing through Baltimore and Washington city, bending along our southern boundary, passes through Northern Kentucky—a little south of Cincinnati—across the centre of Illinois to St. Louis, Missouri, so that we enjoy a climate free from the chilly blast of northern latitudes, and exempt from the parching and sultry heat in the States on the south.

Since the settlement of the Southern States, the springs and mountain air of Virginia have been the "El Dorado" of the southern mind, and the annual resort to recover health undermined by the malarial exhalations of a torrid sun.

A modern writer[1] says of the mountain counties:—

"For variety and fertility of soils, fine water power, central position, salubrious and delightful climate, beauty and grandeur of scenery in plain and on mountain, it can literally and with severity of truth be said to be unsurpassed, if equalled, in the United States; or as a farming region in which to make homes of comfort, opulence, and refinement."

With a position between the 37th and 40th degrees of north latitude, and an elevated point above the sea-level, so thoroughly and rapidly drained as to preclude any stagnant water or marshy exhalations, and a fresh, pure mountain air, we have none of the causes inducing malarial diseases, such as obtain in the States lying west and south of us.

The universal report of practising physicians in different parts of the State is, that, proportioned to the population, there is a less ratio of mortality than in any other part of the country. Nay more, that there are few new residents, or sojourners, particularly if from the Northern States, whose health, if not restored, is not decidedly improved.

It is not an uncommon experience of many of our citizens who, under the glowing descriptions of the *west*, and the cheapness of farms there, have been induced to emigrate thither; but under the powerful miasmatic influences of that country, their health is generally broken down, and after a short struggle with intermittents in

[1] I. R. Dodge. West Virginia, its Farms, etc.

summer and fall, and pneumonia in winter, the remnant of the family were almost sure to return, looking so lean and sallow as scarcely to be recognized by their friends, and feeling like the "discontented squirrel" of the fable, perfectly satisfied to return to the old homestead, and spend the remainder of their days.

Although some points along the eastern boundary, on account of their altitude and exposure, might be suggestive of hyperborean blasts and eternal snows in winter, and little warmth from the sun's rays in summer, such is far from the fact.

On this point, we quote a description of Pocahontas County, the most elevated in the State. (I. R. Dodge. *West Virginia, its Farms, etc.*)

"In their rough mountain heights, remote from railroads and navigable rivers, dwell three thousand nine hundred and fifty-eight hardy mountaineers, occupying eight hundred and twenty-eight thousand nine hundred and twenty-one acres in farms (less than one-tenth improved), worth two million fifty-one thousand seven hundred and eighty dollars. Sheep husbandry flourishes here, numbering ten thousand three hundred and thirty-eight animals, and cattle abound. Value of live stock, three hundred and twenty-eight thousand and two dollars. Of Indian corn, forty-eight thousand two hundred and twenty-nine bushels. Rye, ten thousand seven hundred and seventy-eight bushels. Wheat, eight thousand nine hundred and thirty-three bushels, etc. These few figures are given merely to show that the Alleghany Mountain-tops, among the most remote and inaccessible portions of West Virginia, do contain homes of comfort, plenty, and sturdy independence."

The following meteorological tables, taken in different portions of the State, and at different altitudes, are herewith submitted. Kanawha or Charleston, and Lewisburg from the Smithsonian Record; Wheeling from my own Register.

TABLE I.

Month.—1859.	Charleston, W. Va.			Lewisburg, W. Va.			Wheeling, W. Va.		
	Max.	Min.	Mean.	Max.	Min.	Mean.	Max.	Min.	Mean.
January	62°	6°	35°.14	62°	—2°	32°.55	55°	1°	30°.00
February	66	18	41.69	64	13	38.40	60	16	35.72
March	75	30	51.58	72	30	47.68	72	22	45.22
April	80	31	53.98	85	25	51.96	72	24	45.60
May	86	48	65.62	82	48	68.03	84	45	65.25
June	91	42	68.51	90	38	69.93	92	37	64.35
July	95	57	74.67	92	50	75.93	94	50	71.34
August	92	52	73.38	92	60	74.33	90	45	70.34
September	84	50	65.93	79	34	61.29	78	43	62.32
October	80	25	50.99	69	20	48.35	70	30	48.16
November	79	20	46.91	70	14	44.23	69	24	40.11
December	76	17	34.97	71	5	33.33	69	3	30.00
Mean year			57.78			53.83			50.70
Altitude			600 ft.			1800ft.			640 ft.

Climatology of Taylor County for the year 1867.—By W. H. SHARP, M. D., Grafton.—The following statistics have been taken from observations made during the past year for the Department of Agriculture at Washington, and although imperfect, are respectfully submitted.

The average temperature for the year was 55°.48; the lowest mean average for year was for January, 24°.77; the highest mean was for August, 77°.18.

TABLE II.

Month.	Lowest point during month.	Highest point during month.	Lowest average for whole day during month.	Highest average for whole day during month.	Average for month at			Mean for month.
					7 A. M.	2 P. M.	9 P. M.	
January	2°	52	7°.33	44°.66	19°.29	30°.12	24°.90	24°.77
February	5	60	13.	54.66	34.78	51.60	41.03	42.47
March	10	62	24.66	54.66	35.16	48.79	39.03	40.77
April	30	82	40.	69.66	44.9	68.13	52.7	55.24
May	45	90	50.	77.	55.76	68.12	58.	60.63
June	56	94	70.	82.	68.70	84.11	72.05	74.95
July	56	100	70.	83.33	69.45	85.89	76.12	77.15
August	45	98	66.66	84.66	70.08	89.16	73.20	77.48
September	45	96	56.66	82.	62.70	83.26	68.	71.33
October	33	88	41.	68.66	47.77	69.93	54.87	57.52
November	16	75	19.33	61.66	41.20	58.56	43.93	47.90
December	6	59	11.	56.	33.91	38.93	33.93	35.60
Sums					583.70	776.	637.82	665.79
Means					48.64	64.66	53.15	55.48

TABLE III.—*Amount of Rain and Snow, &c., during the same period.*

Months.	Inches rain fell.	Inches snow fell.	Total inches water.	Number of rainy or snowy days.	Number of thunder-storms.
January	50.	24.	2.40	7	.....
February	6.66	4.	7.	12	.....
March	10.75	6.	11.25	14	1
April	3.13	.....	3.13	11	1
May	4.88	.....	4.88	13	.....
June	1.20	.....	1.20	5	.....
July	5.60	.....	5.60	15	.....
August	4.90	.....	4.90	10	.....
September	.75	.....	.75	4	5
October	4.80	.....	4.80	12	.....
November	1.4	1.	1.5	9	.....
December	1.9	18.5	3.5	16	.....
	46.7	47.5	50.91	128	7

The observations show a freedom from heavy thunderstorms and violent winds which prevail further westward. The prevailing winds during the year were west and southwesterly; next most frequent were easterly winds.

TABLE IV.—*Monthly Mean Temperature at Marietta, Ohio, during the last Eleven Years.* By GEORGE O. HILDRETH, M. D.

Latitude of Marietta, 39° 25′.

Months.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.
January . . .	19°.10	40°.44	33°.00	32°.66	32°.33	35°.31	31°.01	28°.25	24°.22	29°.36	20°.70
February . . .	42.73	28.00	37.77	35.00	38.20	33.66	35.85	32 57	32.69	30.53	38.16
March . . .	37.91	40.70	48.48	44.13	43.00	40.19	37.17	36.81	45.76	39.07	36.60
April . . .	42.83	54.70	52.03	54.30	52.70	51.11	48.94	48.65	55 12	55.53	52.60
May	56 95	60.70	67 20	65.50	56.39	59.56	62.04	61.38	59.92	57.32	54.83
June	70.30	72 70	67.23	68.03	70.25	65.90	66.12	68.18	73.64	68.67	70.27
July	74.44	75.20	74.23	73.68	68.17	72.71	73.16	74.09	71.70	74.69	71.81
August . . .	72.33	72.13	72.10	72 23	71.00	73.40	73 98	73.10	69.77	66.25	71 02
September . .	66.75	64.33	63.51	62.10	66.00	68.34	62.88	63.62	71.30	63.42	67.16
October . . .	52.33	56.66	49.12	62 17	44.20	54.97	49.86	49.90	51.32	53.13	52 68
November . .	40 37	38.80	45.50	40.29	41.33	40.84	43.01	42.95	41.38	41.54	42 77
December . . .	41.20	40.64	30.48	30.13	37.00	35.52	35 92	32.44	35.98	29.47	31.74
Mean for year . .	51.43	53.75	53.38	53.35	51.71	52.62	51.91	51.00	52.73	50.74	50.86

TABLE V.—*Monthly Fall of Rain, including depth of Melted Snow, at Marietta, Ohio, during the Eleven Years ending with* 1867. By GEO. O. HILDRETH, M. D.

Latitude of Marietta, 39° 25′.

Months.	1857.	1858.	1859.	1860.	1861.	1862.	1863.	1864.	1865.	1866.	1867.
	inch's	inch's	inch's	inch's	inches	inches	inches	inches	inches	inches	inches
January .	1.55	1.66	3.10	3.25	2.704	7.373	6.639	1.405	3 835	3.940	2 980
February .	1.50	3.41	7.20	1.25	2.316	2.816	2.768	2.076	2.957	3.448	5.272
March . .	1.30	1.00	5.08	1.08	2.278	3.392	4.030	4.041	5 840	3.912	5.858
April . .	3.08	5.00	6.46	5.30	6.372	7.674	1.934	3.542	3.467	3.874	2.498
May . .	5.16	12.42	1.56	2.88	5.619	3.783	1.982	4.172	8.085	0.949	6.042
June . .	4.08	3.09	4.62	2.01	3.961	2.527	2.135	2.024	4.968	4.563	2.740
July . .	4.87	5.33	1.08	5.37	5.140	3.524	3.223	1.950	5 887	4 519	5.048
August . .	5.21	7.42	4.46	4.14	3.031	3.641	1.944	7.575	3.302	4 159	4.060
September .	1.63	1.37	4.95	3.26	4.312	0.285	2.341	3.132	3.951	7.700	0.602
October . .	2.58	7 66	2.79	4.35	4.433	2 573	4.692	2.845	1.465	2.945	4.470
November .	4.84	4.82	2.08	4 01	4.631	2.053	2.807	3.915	1.350	3.520	1.941
December .	4.84	8.66	5.17	2.08	1.618	3.072	2.571	4.259	3.734	3.740	5.195
Am't for year	40.64	61.84	48.55	39.48	46.415	42.713	37.066	40.936	48.841	47.269	46.706

TABLE VI.—*Abstract from Register of Deaths for* 1866 (*Auditor's Report*).

Apoplexy	30	Fevers (?)	306
Bowels, inflammation of .	26	Heart, disease of . .	28
Brain, diseases of, . .	52	Measles	1
Cancer	16	Old age	93
Cold (?)	7	Paralysis	33
Childbed	25	Pneumonia	38
Consumption	279	Rheumatism	9
Croup	94	Scrofula	15
Cholera morbus and cholera infantum . .	61	Smallpox	4
		Unknown	514
Diarrhœa	57	Violent or accidental .	107
Diphtheria	118	Whooping-cough . .	48
Dropsy	77	Miscellaneous causes .	307
Dysentery	84	Sore-throat (diphtheria?)	4
Epilepsy	26		
Erysipelas	21	Total . .	2492

Males 1264
Females 1228

Returns from all counties except Wayne.

TABLE VII.—*Abstract of Register of Deaths for* 1866, *showing the number for each month.*

January	144	September	233
February	192	October	231
March	248	November	181
April	236	December	178
May	203	Date not given . . .	35
June	152		
July	190	Aggregate . .	2492
August	271		

TABLE VIII.—*Register of Deaths at Different Ages.*

Under one year	598	From 50 to 60 years	131
From 1 to 5 years	375	" 60 to 70 "	120
" 5 to 10 "	142	" 70 to 80 "	121
" 10 to 20 "	216	" 80 to 90 "	75
" 20 to 30 "	244	" 90 to 100 "	15
" 30 to 40 "	169	over 100 "	3
" 40 to 50 "	122	Age not given	14

The above ages give for infancy	24.9	per cent.
" " childhood	21.3	"
" " adolescence	8	"
" " manhood	20.1	"
" " old age	18.7	"

The number of marriages for 1866 were		4325
Births { Male	5464	
Births { Female	5066	
		10,530

Cholera.—The first epidemic of this disease came to the then town of Wheeling, by steam-boat from Cincinnati in the early part of May, 1833. Several cases had been removed from the steamer; soon after sporadic cases occurred in different parts of the town, and within two or three weeks became generally diffused.

The point of greatest severity was about the "market-space" in the centre of the town. Now this position was at the time in notoriously bad sanitary condition from accumulations of filth; the removal of which the "health officer" had previously urged upon the council; but they refused, until after the epidemic had broken out; then, it was thrown over the river bank, spreading death and desolation in the neighborhood, carrying off at one point thirteen, and at another twenty-three victims.

To test the virtues of coal smoke and heat (in June and July) in staying the epidemic, cart loads of coal were deposited at intervals of fifty yards along each side of the principal streets and fired; the volumes of dense black smoke enshrouding the town—deserted streets, except by the frequent funeral train—sorrow and alarm depicted on every face, formed a scene more easily imagined than described; its impressions are still very vivid in my mind.

The *treatment* at that time was purely experimental; to one case (an old man) the doctors gave teaspoonful doses of calomel; he recovered, but was sorely ptyalized.

The popular mind had great confidence in a large Burgundy pitch plaster worn over the stomach and bowels, as a preventive, so that it came into general use; in proportion to their *faith* in its

virtues, their fears became quieted, and doubtless many cases were prevented.

Our next visitation began in February, 1849; as before, it was brought here by the steamer Embassy, from Louisville, Ky. Two of her deck hands were "put ashore," both being well-marked cases, as attested by the whole of our medical faculty. On the 19th of the following May, the first local case occurred in the northern part of the city; within two or three weeks it spread extensively. The last case falling under my care was on 20th October, 1849.

In the following June (1850) it was again introduced by the steamer Mount Vernon; very soon afterwards anomalous bowel complaints appeared, and increased in number and severity, until in the latter part of the month, when well-marked cases occurred, until the latter part of September. In 1851 we escaped the epidemic, although violent and fatal cases of cholera morbus were not uncommon.

Cholera broke out again in June, 1854, and continued until the latter part of August. This was the severest epidemic since 1833. During July it was very fatal; the month was extremely dry and hot, until the last ten days, which were marked by three violent storms, occurring on the 20th, 24th, and 29th; no abatement of the extreme heat followed these falls of rain.

It is a remarkable fact, that, during this epidemic, there was, proportioned to the population, a larger percentage of cases in our suburban towns and adjacent farms than in the city.

Our Board of Health reported 68 deaths in July, and 22 in August, from cholera. At that time the average deaths from all causes, before the epidemic, was about twenty a month.

Except along the lines of travel (Baltimore and Ohio Railroad, Ohio and Kanawha Rivers), I do not believe a case of cholera has occurred in the State. Many of our physicians think that it is impossible for it to exist in the mountainous portion.

Our most successful treatment consisted in absolute rest, dry heat, counter-irritation over the stomach and bowels, with small and repeated doses of a combination of calomel, capsicum, and strychnine. Spirits of turpentine and sulphuric acid formed the basis of some prescriptions.

Diphtheria.—The first intimation of this disease among us is noted the last week of June, 1859, some five or six cases in East Wheeling, all children, attended with exudation of false membrane in the fauces, very thick, firm, and of an ash color, typhoid form

of fever, eruption of vesicles over the body, and rapid prostration. From that time until the present our city has not been free from it, and in fact it has prevailed in nearly every other part of the State. In Taylor, Marion, and Harrison counties about three years ago it was especially frequent and fatal.

We have had various forms and complications of this malady, which for convenience may be reduced to three: 1st. Marked by some swelling of the tonsils, with slight redness and several points or dots of grayish color, usually preceded by pain in the back of the head.

2d. Decided redness and swelling of the tonsils and soft palate, which are covered more or less with diphtheritic effusion, attended with difficult and painful deglutition, accompanied by fever, headache, and more or less swelling of the cervical glands.

3d. Swelling and effusion in the fauces and nares, the parts not covered with effusion almost of a livid color; the submaxillary and adjacent glands much swollen, red, hard, and painful; deglutition very difficult; an acrid discharge from the nostrils; fever with delirium and great prostration. Occasionally in the second but more frequently the third variety, about the fourth or fifth day, dyspnœa supervenes, and croupal cough with the expulsion of false membrane-casts of the bronchial tubes, which I have seen from two to nine inches in length.

This membrane proves on microscopical examination to be composed of a "fibrinous basement, interspersed with exudation corpuscles;" it is firm and elastic.

There is scarcely a doubt that persons of scrofulous constitution are more seriously affected by the disease, and more liable to its invasion.

We think this disease is conceded by the profession to belong to the class of blood poisons, the intimate nature of which we cannot explain; we consider it infectious. Its sequela are paralysis, albuminuria, neuralgia, croup, bronchitis, etc.

Our most reliable *treatment* has been the free use of chlorate of potassa, tinct. ferri chloridi, muriate of ammonia, warmth and nourishing diet for the milder forms, and in the grave or malignant variety, in addition, quinine, milk-punch, carbonate of ammonia, beef-tea, lime-water inhalations, etc., under all of which the patient will generally die. The deaths from diphtheria in the State for 1866, were 118, most probably less than the actual number.

Consumption.—The majority of the inhabitants of West Vir-

ginia being engaged in agricultural pursuits, are placed under hygienic conditions unfavorable to the development of this disease.

From the best data within reach, we should judge that one-third of the mortality of the State reported for the year 1866, happens in the manufacturing districts. The returns show one death for every 1433 inhabitants.

An idea of phthisis pulmonalis, not fully in accordance with my own views, has recently been published in the *London Lancet*, by William Budd of the Bristol Royal Infirmary, viz., "that phthisis is a self-propagated zymotic disease, and that all the leading phenomena of its distribution may be explained, by supposing that it is disseminated through society by specific germs contained in the tuberculous matter cast off by persons suffering from the disease," among his *reasons* for this conclusion are the following: (d.) "Its much greater *prevalence in low levels* and among crowded communities, and its *entire absence*, unless by casual importation, at *very high levels*, conditions which are well known to rule in the same directions, the spread of zymotic diseases generally, and especially of that group in which, as in phthisis, the morbific matter is cast off in a liquid form."

Scarlatina.—Our northwestern in common with other parts of the State have been serious sufferers from this fatal disease. We remember when our old physicians called it "French measles," its then common name. In the early part of the present century a company of French emigrants settled the present town of Gallipolis, Ohio, and brought this disease into the western part of the country. From this point it spread among the adjacent settlements, and was not at that time distinguished from measles (rubeola) except by its severity and fatality; hence the name.

We have had the usual forms of simple, anginose, and malignant.

The first endemic we will notice occurred in the winter of 1849–50. It was severe and fatal.

It will be remembered that our visitation of cholera had been during the preceding summer, and what influence this may have had in determining its type is hard to decide; but the symptoms rapidly succeeding the chill, were vomiting and purging, and a condition not unlike the collapse of that disease, but soon followed by reaction and the appearance of the characteristic eruption, with fever, delirium or coma, great swelling of the fauces, with ulceration or sloughing, rapid prostration, and death.

During March, 1850, it still prevailed, but assumed a *mild type*, needing little or no medication. The maximum temperature of this month was 64° Fahr., mean 41°.1, minimum 14°. Rainy and snowy days 9, cloudy 12, fair 10. Winds N.W. by N. 13 days, S.W. 8 days. These facts are stated to assist one more competent to explain such results.

Scarlatina was endemic here (Wheeling) again in 1854. Cholera was prevailing at the same time (July and August).

The points to be noticed are its malignant type and great liability to be followed by dropsy and swelling and suppuration of the cervical glands.

There was nothing new in the *treatment*, the usual unsatisfactory routine of tonics, stimulants, and local applications were prescribed.

On examining the bills of mortality of this city for the last twenty years, we find this part of the State to have been scarcely free from scarlet fever; but why its type should be mild one season and malignant in the next, or the same season it should markedly change its type, are queries which we have vainly endeavored to solve.

Fevers.—Under this head are included intermittent, remittent, and typhoid fevers.

In the early history of Western Virginia, especially along the valley of the Ohio River, intermittents occurred as regularly as the fall months, and along with them bilious remittent; in fact, the former "run into" the latter, and the latter as commonly terminated in the former. Most of the Ohio River bottoms at that period contained swamps and low wet grounds, which during the last twenty years have been drained, which no doubt has in a great measure done away with this class of fevers.

Our bilious remittents were announced by lassitude, loss of appetite, rigors, headache, followed by vomiting of bilious matters, intensely bitter taste, tongue furred, yellow or brown, and hot fever, attended with remissions and exacerbations. The danger of the attack was due to *inflammatory complications* of the head, chest, or abdomen. The remedies universally adopted were bleeding, emetics, mercurial purgatives, nitrous powders, and quinine, under which ninety-five per cent. recovered.

The prominent idea in the minds of most physicians in treating it was, that if the "gums were touched" the patient would almost surely recover, and experience proved its truth. Now this *biliousness* often attended other complaints, in fact, its impress was

upon a majority of diseases, requiring especial attention before convalescence could be established; so that we remember hearing an old physician remark "that if a man should break his leg, he would grow bilious before it united."

Soon after the advent of cholera in 1849, *typhoid symptoms* appeared, and in a short period, typhoid or continued type of fever usurped the place of the old bilious remittent, and has continued to hold absolute sway up to the present hour. The apparent tendencies are that *it* will have to give place before many years to true typhus.

With the change of type came the necessity of a radical change of *treatment.* The *lancet* was sheathed, and has grown rusty in its case. We have not known or heard of a patient being *bled* for probably fifteen years; and as for bleeding in the present form of fever, it is never practised.

The supposed or real effect of mercurials diminishing or dissolving the fibrin of the blood, has thrown them out of the therapeutics of this fever. Some practitioners are still anxious to "correct the secretions."

Typhoid fever with us has presented the same symptomatology and pathology clearly and fully described by others. We judge the views of a majority of our profession are in favor of its infectious character.

The *treatment* is regulated by the mildness or gravity of the attack. In the milder forms, tinct. ferri chloridi, with nourishing animal broths and careful nursing, will carry a large proportion of cases to a good convalescence in from two to five weeks.

In the graver forms, where the force of the poison appears to be spent on the brain and nervous system, marked by feebleness and frequency of the pulse, continued delirium, cramps, or rigidity of the extremities, the chief reliance has been upon the strongest stimulants, among which spirits of turpentine and brandy fulfil the indications best. We remember two cases of this character, one of which drank nine gallons, by estimate, of fourth proof French brandy in eight days; and the other, about five gallons in the same period; they recovered from both fever and brandy. The former patient on the eighth day became quite drunk, and his potations were stopped. This happened about ten years ago; they are both in good health at this writing.

In cases where great frequency of the pulse is a prominent symptom, veratrum viride and quinine, added to the stimulation,

produce favorable results. Chlorate of potassa is also a favorite prescription.

The return by the registry of the State,[1] of deaths from fevers is 306.

Dysentery.—This disease, to a greater or less extent, is our annual visitant during August, September, and October. It is more prevalent in the rural districts. An old practitioner remarked as the result of his observation, that it was most apt to occur, and more fatal, among the inhabitants of the "white oak lands;" these lands are along the ridges of our hills, having a clayey and calcareous soil. By the latter part of summer, or early fall, particularly if the season has been a dry one, the springs and wells either nearly fail or dry up; their sensible and chemical qualities become changed, containing double the quantity of the salts of lime, and often sulphuretted hydrogen gas; thus rendering their taste nauseous and unpalatable, and inducing more or less griping and purging when drank. Farmers and others working in the open field under a hot sun, perspiring copiously during the day, with cool dewy nights, and drinking the water described all the time, have sufficient provocation for dysentery.

Full doses of opium, sufficient to remove the tormina and tenesmus, followed by mild mercurial cathartics, generally cure it.

Topography of the City of Wheeling.—Wheeling is situated in latitude 40° 7′ north by longitude 80° 42′ west, in Ohio County, West Virginia, on the east bank of the Ohio River.

Its average altitude is 640 feet above the sea level.

The original town was laid out in 1792 by Col. Ebenezer and Jonathan Zane, on a plateau elevated some 80 or 90 feet above the level of the river; there is a declivity of some 40 feet in this plateau, to the level of the "river bottom" proper, upon which two-thirds of the city is built. The general elevation of the "river bottom" is 40 feet above low water.

The eastern boundary is flanked by hills having a mean altitude of about 700 feet.

Wheeling Creek, taking its rise in Greene County, Pennsylvania, and having a very tortuous course, flows along the eastern, and by an abrupt curve around the southern base of Wheeling Hill, emptying into the Ohio near the centre of the city.

[1] Auditor's Report.

The lowest points are subject to inundation during high floods of the river. Opposite the city is Zane's Island, about one mile in length, with an area of about 400 acres; it is connected with the main land by a wire suspension bridge having a single span of 1010 feet.

The original town has received many additions, besides the villages of Clinton, Fulton, Manchester, Columbia, and La Grange adjoining it, and Martinsville, Bridgeport, Kirkwood, and West Wheeling along the opposite side of the river.

Its length along the river is about four miles, with an average breadth of one-fourth of a mile.

The streets have a good width, are laid out at right angles to one another; those on the hill-side have a rapid drainage, while the more level portions are provided with sewers. The houses are mostly built of brick.

The supply of water is drawn from the river by forcing it into a "basin" at an elevated point on the side of Wheeling Hill, and from thence is distributed over the city through iron pipes.

The present population is 20,254, made up of representatives of most of the European nations, with some descendants of the first settlers; they are an active, industrious people, devoted chiefly to manufactures, of which iron, nails, and glass are the chief. The "iron mills" alone give employment to about 2000 persons.

The forest trees have been removed from the "tops" of the adjacent hills, and but few are left on their sides.

In making the following section I was accompanied by Mr. Ed. Bocking and Dr. B. W. Allen, of this city.

SECTION OF ROCK STRATA OF "CHAPLINE'S HILL," ORDER ASCENDING.

Bed of Wheeling Creek is formed of magnesian limestone, containing fossils; depth of strata unknown. The dip of all the strata is southeast, 12.07 feet per mile.

1. Sandstone, used for building purposes in this city; the new Episcopal church is built entirely of it, and the front of the new Methodist church; in our sulphurous atmosphere it is liable to disintegrate in consequence of its containing pyrites; the upper half of the strata is loose, the lower part presents about 24 feet of solid face; 102 feet.
2. Concrete stone, nodules of carbonate of lime, with crystals of same, very hard, of bluish color; 2 feet.
3. Nodular mass of sandstone, with iron and yellow clay; 4 feet.
4. Blue clay, intermixed with boulders of limestone; 5 feet.
5. Bituminous coal; this is the chief vein; worked easily from the face of the hill by horizontal openings and "tram railroads" to carry it directly to the iron furnaces; the "top or clean coal" is very pure, of about 2½ feet depth; the lower part of the vein is traversed by several seams of "slate," composed of sulphuret of iron, which, on being collected in beds or masses and exposed to the action of air or oxygen and moisture, becomes sulphate of iron or copperas; there are some few fossil ferns to be found, but they are very rare in this coal measure; fourteen miles above Wheeling this vein reaches the top of the river hill, and six miles below dips under the bed of the river; 6 feet.
6. Soapstone, forms the "roof" of the coal banks; 2 feet.
7. Blue clay, used as fire-clay about the "furnaces;" 3 feet.
8. Limstone, stratified; colors, white, blue, and gray; this is the seam from which our lime for building purposes is made; I learn in a recent trial of various kinds of lime, by the Baltimore and Ohio Railroad Company, for the purpose of building bridges and tunnels, they prefer this lime; it is semi-hydraulic; with coarse gravel, etc., it forms a very durable concrete; a number of houses have been built of this composition; 54 feet.
9. Bituminous shale, disposed in very thin layers; 3 feet.
10. Sandstone, in strata from 2 to 10 inches thick; fine oxide of iron precipitated on it; 9 feet.
11. Limestone, yellow color, soft, disintegrates readily; 9 feet.
12. Bituminous shale, contains sulphuret of iron; 1½ foot.
13. Clay slate, bluish color, very soft; 8½ feet.
14. Sandstone, disposed in layers of different thickness, with oxide of iron deposited on surface; used for flagging; 16 feet.
15. Limestone, dark blue color; conchoidal fracture; makes excellent lime; 20 feet.
16. Limestone, strictly part of the strata below; contains seams of different colors, white, yellow, and blue; 84 feet.
7. Sandstone, fine-grained and hard; greenish color; 8 feet.

18. Limestone, interspersed with crystals of carbonate of lime; yellow color; soft; 15 feet.
19. Sandstone, olive-green color; fine-grained and very hard; 9 feet.
20. Limestone, upper portion of strata filled with boulders containing carbonate of iron; 22 feet.
21. Sandstone, gray color; loose stratification; many fissures, out of which springs of good water flow; 38 feet.
22. Limestone, dark-blue color; very hard; 5 feet.
23. Bituminous shale, coated with iron rust; 3 feet.
24. Limestone, brown color; 6 feet.
25. Sandstone, coarse; soft; gray color; stratified; 35 feet.
26. Limestone, dark brown, with crystals of carbonate of lime; 6 feet.
27. Cannel coal, 18 inches workable; this seam, seven miles east, is near the base of the hills, where, several years ago, "oil" was distilled from it; but the discovery of petroleum made it unprofitable, and the works were abandoned. In early times it was called "black rock" by the settlers, one of whom built a chimney for his cabin out of it; but on lighting his fire, both house and chimney were consumed; he cursed the "black rock," and said it would not do for chimneys; 3 feet.
28. Sandstone, in seams of from one to six inches thick; greenish color; micaceous; 60 feet.
29. Bituminous shale, springs issue from its base; 1½ foot.
30. Sandstone, gray, micaceous; 45½ feet.
31. Limestone, light blue, hydraulic; 8 feet.
32. Sandstone, micaceous, with carbonate of iron; 16 feet.
33. Limestone, snuff color, with veins of crystallized carbonate of lime; 8 feet.
34. Sandstone, coarse-grained, soft; contains mica and iron; forms base of soil; 84 feet.
35. Yellow clay, formerly covered with oak, hickory, beech, poplar, walnut, etc.; 14 feet.

In the following tables the temperature of the air was observed three times a day, at the hours 7 A. M., 2 P. M., and 7 P. M.; expressed in degrees of Fahrenheit's scale. My record relates to the indications of the thermometer, direction of the wind, depth of rain and snow, state of the sky, occurrence of thunder storms, frost, hail, auroras, etc. The thermometer was suspended about five feet above the ground, and protected from radiation.

E. A. HILDRETH, M. D.

WHEELING, WEST VIRGINIA.

TABLE VIII.—*Observed Mean Monthly Temperatures at Wheeling, W. Va.* By E. A. HILDRETH, M. D.

Year.	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Mean Annual.
1848	..	..	..	..	..	70°.34	72°.60	72°	60°.16	52°.00	39°.00	..	....
1849	..	..	..	..	..	..	..	..	..	..	..	..	....
1850	28°.48	31°.19	41°.16	48°.80	58°	75.66	76.60	76.80	68.60	52.70	50 00	37°.00	53°.75
1851	35.50	39.30	..	..	..	..	73.	73.	70.66	52.50	..	..	....
1852	26.09	34.11	36.08	48.34	59.	70.	74.5	..	..	..	..	..	....
1853	..	..	..	..	..	..	..	..	..	..	..	..	....
1854	28.93	32.01	37.67	49.26	60.93	71.33	81.67	78 33	70 16	50 42	39.	31.69	52.62
1855	35	25.14	35.50	53 80	62.	64.82	78.33	74.32	70.	49.32	44.67	33.67	51.79
1856	19.50	24.66	29.23	50.66	61.54	74.	77.	68.	64.	48.	40.33	28 66	48.80
1857	17.33	40.80	37.30	40 16	55.33	67.	72.40	68.35	64	49.	39.	37.22	49.
1858	38.	26.80	38.35	52.40	59.34	73.60	81.16	73.	65.67	56 16	38 70	38.	53.43
1859	30.	35.72	45.22	45 60	65.25	64.35	71.34	70.34	62 32	48 16	40 11	30.	50.70
1860	32.	32.66	40.10	50.20	65.67	67.90	66.52	73.21	64.90	52.65	41.76	31.52	51,59
1861	30.67	38.30	38	52.	57.40	73.58	70.	74.62	62 63	53.12	42 68	37.50	52.54
1862	33.84	33.	40.70	51.	57.50	64.60	74.33	84.34	62 33	51 48	41.30	38.33	52 73
1863	34.22	35.83	38.53	44.80	64.18	64.11	76 33	72.	61.10	51.20	44.27	32.66	51 60
1864	29.44	33.91	36.45	45.33	60.70	68 60	74.85	75.33	61.72	49.86	42.80	32.45	50.95
1865	23.92	30.12	44.16	53.50	59.33	73 77	74 71	69.30	71.79	42.41	40.83	38.	51 83
1866	29.50	29.28	38 66	55.66	56.33	68.82	74.06	68.67	64.86	54.86	41.33	31.53	51.10
1867	20.19	39.	37.76	54.50	58 55	73.66	76.	76.66	69.63	52.30	45.52	31.88	52.14
Month. mean	28.97	33.05	38.43	49.75	60.06	69 77	73.91	73.43	65.56	50 95	41.96	34.01	51.64

TABLE X.—*Highest Temperature observed in each Month.*

Year.	Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1848 . .	...	...	...	...	...	92°	89°	91°	82°	75°	60°	...
1849 . .	...	...	...	...	...	...	...	...	...	...	...	...
1850 . .	...	...	64°	80°	79°	90.5	95	90	85	74	66	58°
1851 . .	57°	62°	...	...	...	...	92.5	86	94	75	...	...
1852 . .	48	51	59	74	83	86	94	...	...	...	...	...
1853 . .	...	...	...	...	...	...	...	...	...	...	...	...
1854 . .	...	...	...	...	...	90	104	95	97	70	52	56
1855 . .	56	46	48	86	82	94	92	90	86	68	58	55
1856 . .	37	44	50	81	85	99	96	87	88	74	63	51
1857 . .	42	69	68	70	82	89	91.5	91	86	68	72	49
1858 . .	60	50	69.5	78	80	95	97	94	87	86	60	64
1859 . .	55	60	72	72	84	92.5	94	90	78	70	69	69
1860 . .	53	64	68	78	89	90	89.5	92	85	78	73	49
1861 . .	46	68	70	80	82	91	91	95	84	78	62	64
1862 . .	57	51	70	82	82	82	93	90	82	80	68	68
1863 . .	52	47	60	70	80	92.5	92	94	86	72	65	50
1864 . .	62	60	52	58	80	95	96.5	96	75	79	60	54
1865 . .	38	42	70	74	82	96	96	90	89	72	68	70
1866 . .	65	69	69	80	78	92	102	84	80	76	60	60
1867 . .	36	55	56	72	82	92	98	92	91	80	72	65
Monthly means	51	57	63	75	82	91	94	91	85	75	64	59

TABLE XI.—*Lowest Temperature observed in each Month.*

Year.	Jan.	Feb.	March.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.
1848 . .	...	...	...	...	...	46°	60°	56°	40°	35°	28°	...
1849 . .	...	...	...	...	...	...	...	...	...	...	...	...
1850 . .	...	...	14°	29°	44°	53	67	62	55	40	28	22°
1851 . .	4°	10°	...	...	...	...	65	62	40	30	...	...
1852 . .	—13	10	14	32	40	50	52	...	...	...	...	...
1853 . .	...	...	...	...	...	...	...	...	...	...	...	...
1854 . .	...	...	...	...	...	50	60	50	50	38	28	8
1855 . .	14	8	20	27	40	45	60	60	47	38	25	7
1856 . .	—15	—12	—7	32	39	57	54	48	37	32	22	3
1857 . .	—10	9	7	22	34	52	52	50	44	32	9.5	20
1858 . .	26	—2	2	31	45	49	62	48	40	39	18	14
1859 . .	1	16	22	24	45	37	50	45	43	30	24	3
1860 . .	0	3	20	27	39	51	53	49	36	34	10	15
1861 . .	11	0	12	32	32	50	52	50	40	30	28	22
1862 . .	5	15	16	35	39	50	59	60	39	30	26	10
1863 . .	6	3	16	20	45	45	62	46	45	32	17	18
1864 . .	—10	0	12	36	38	45	48	52	46	32	20	6
1865 . .	—2	—2	16	32	35	56	50	55	50	32	29	10
1866 . .	—4	—5	14	32	33	50	56	52	45	36	25	9
1867 . .	—9	25	8	38	35	52	52	57	38	32	18	8
Monthly means	—2.66	5.2	12.4	28	38.8	49.3	56	53	43	34	22	11.6

TABLE XII.—*The Frequency of each Wind recorded three times a day during twelve years*—11,380 *observations.*

	S.	N.	W.	E.	S. W.	N. E.	N. W.	S. E.
January . .	35	305	80	...	275	...	295	10
February . .	25	125	40	...	340	...	240	45
March . . .	20	295	85	15	350	5	370	25
April . . .	20	215	80	15	360	...	400	50
May . . .	5	150	115	10	430	...	270	20
June . . .	30	110	75	...	550	...	170	20
July . . .	20	65	230	...	545	...	215	15
August . . .	25	70	45	15	440	...	235	10
September . .	...	100	85	...	375	...	215	25
October . .	50	115	50	...	435	...	210	5
November . .	15	130	15	...	340	...	330	35
December . .	35	110	35	...	300	...	360	5
Year . . .	280	1790	935	55	4740	5	3310	265

The force of the winds is not noted. The great prevalence of the S. W. and N. W. winds are easily observed as well as the infrequency of the easterly winds. The situation of our city in this part of the Ohio valley, flanked on the east by the Alleghany range of mountains, with a comparatively open country on the west and north, would appear sufficient reason for this result. When violent S. E. storms occur on the Atlantic coast south of us, they are seldom felt here.

TABLE XIII.—*Atmospheric Precipitation.*

Number of Rainy and Snowy Days.

Year.	Jan.	Feb.	Mar.	April	May	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1848	...	...	...	...	...	9	15	11	5	10	10	...	...
1849	...	...	...	...	...	...	...	...	...	...	...	...	...
1850	...	...	9	13	3	11	9	8	7	7	10	16	...
1851	7	10	...	...	...	...	7	4	9	5	...	...	...
1852	19	10	12	18	7	8	4	...	...	...	...	...	...
1853	...	...	...	...	...	...	...	...	...	...	...	...	...
1854	...	...	...	...	...	5	6	5	3	6	5	10	...
1855	9	12	8	5	7	9	14	11	10	6	11	12	114
1856	12[s]	11[s]	8[s]	6	10	7	5	6	7	5	5	5	87
1857	14	8	9	9	10	17	15	12	4	10	14	13	135
1858	7	9	6	15	20	8	9	13	3	11	16	17	134
1859	12	12	16	18	10	14	7	12	11	8	7	11	138
1860	11	9	9	13	16	8	12	10	10	10	12	11	131
1861	13	12	14	13	10	7	15	6	7	5	11	3	116
1862	17	12	14	11	7	10	7	6	3	9	8	12	115
1863	18	14	10	11	6	8	11	8	6	7	11	8	118
1864	8	12	9	12	11	6	6	9	15	13	16	20[s]	137
1865	15	8	15	13	14	8	10	8	6	9	3	13	122
1866	7	6	14	6	4	9	8	5	10	5	6	10	90
1867	11	8	8	8	9	10	9	6	none	4	7	14	94
Monthly av.	11.8	10.2	10.7	11.4	9	9	9.4	8.2	6.5	7.6	9.5	11.6	

Average number rainy and snowy days in thirteen years, 117.77

TABLE XIV.—*Number of Cloudy and Fair or Clear days.*

	Jan.		Feb.		Mar.		April.		May.		June.		July.		Aug.		Sept.		Oct.		Nov.		Dec.		Totals Annually.	
	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.	Cloudy.	Clear.
1848	..	..	..	..	..	..	..	..	..	..	17	4	5	11	5	15	7	18	4	17	5	15	..	..	..	..
1849	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1850	..	..	..	..	12	10	6	11	10	18	6	13	6	16	8	15	3	20	5	19	4	17	8	7	..	..
1851	10	15	9	9	..	..	..	..	..	..	..	..	7	17	7	20	5	16	5	20	..	..	..	..	..	..
1852	6	6	10	9	7	12	8	4	5	19	6	16	4	21	..	..	..	..	..	..	..	..	..	..	..	..
1853	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
1854	..	..	..	..	..	..	..	..	..	..	4	21	4	21	4	22	5	22	5	20	9	16	6	15	..	..
1855	4	18	11	5	8	15	5	20	4	20	5	16	5	12	3	17	5	15	9	16	5	14	5	14	69	182
1856	4	15	10	8	9	14	12	12	6	15	9	14	7	19	6	19	6	17	8	18	12	13	10	16	99	180
1857	7	10	6	14	5	17	10	11	6	15	7	6	6	10	3	16	3	23	7	14	2	15	7	11	69	162
1858	5	19	6	13	10	15	3	12	6	5	3	20	2	20	4	14	8	19	4	16	11	3	9	15	71	161
1859	5	14	7	9	3	12	3	9	5	16	4	12	2	22	6	13	6	13	4	19	8	15	11	9	64	163
1860	6	14	7	13	5	17	8	9	3	12	6	16	6	13	6	15	9	11	5	16	6	12	9	11	76	159
1861	6	12	10	8	7	10	5	12	6	15	6	17	7	9	5	20	6	17	8	18	8	11	7	21	81	170
1862	7	7	6	11	4	13	6	13	4	20	6	14	11	13	6	19	6	21	5	17	5	18	5	14	71	180
1863	5	8	6	8	7	14	5	14	4	21	6	16	6	14	8	15	3	21	6	17	9	10	8	15	73	173
1864	9	14	8	9	7	15	7	11	4	16	5	20	6	19	11	11	7	8	6	12	7	7	3	8	80	150
1865	7	9	6	14	6	10	6	11	4	13	14	18	5	16	7	16	14	10	3	19	5	22	6	12	83	170
1866	13	11	7	15	4	13	6	18	6	21	5	16	4	19	5	21	6	14	5	21	6	19	7	14	74	202
1867	5	15	6	14	9	14	5	17	7	15	6	14	4	18	6	19	6	24	4	23	6	17	9	8	73	198

Average of cloudy days for thirteen years 77.15
" of clear " " " 172.3

TABLE XV.—*Perpendicular Depth of Rain and Melted Snow (in inches).*

	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Aggregate for year.
1848	...	...	...	...	...	3.80	7.00	4.60	0.85	1.40	2.20	...	...
1855	1.44	1.55	2.35	.90	1·40	4.01	6.16	2.85	4.10	.78	4.10	2.20	31.84
1856	3.70	1.88	.90	2.25	3.25	3.00	.80	1.25	1.05	1.10	1.75	2.10	23.03
1857	7.10	1.15	.15	.20	3.70	3.60	4.05	4.15	3.50	3.30	1.45	3.25	36.60
1858	.70	1.50	.25	3.98	6.85	5.40	2.65	3.95	.80	3.00	3.85	6.05	38.98
1859	1.30	4.45	3.45	6.20	3.55	4.75	2.50	2.31	4.50	2.00	1.50	5.55	42.05
1860	3.70	1.20	.50	7.50	4.17	1.95	3.65	3.10	1.10	1.90	2.00	1.30	32.07
1861	1.50	1.20	.75	2.20	2.00	1.80	4.35	3.65	4.00	3.00	4.95	.60	30.00
1862	4.33	4.75	3.30	3.70	3.85	8.50	3.05	1.30	1.50	.72	2.35	1.85	39.20
1863	2.18	1.31	1.10	2.45	.95	2.20	2.80	1.40	1.65	2 24	1.85	1.35	21.48
1864	1.60	1.10	2.60	2.47	3.45	3.25	4.35	5.30	6.15	1.75	2.75	2.85	37.62
1865	.71	3.90	3.15	1.90	4.10	2.60	3.20	2.55	3.20	1.45	.50	2.30	29.46
1866	2.13	.30	2.45	.90	.35	3.15	2.30	4.75	5.30	2.75	3.35	2.65	30.38
1867	1.23	1.65	1.85	2.03	2.60	1.60	3.00	3.40	no rain	2.25	1.00	1.90	22.51
Monthly av.	2.42	1.92	1.75	2.82	3.09	3.54	3.56	3.18	2.70	1.97	2.40	2.61	

Average for thirteen years 31.17

TABLE XVI.—*Showing the Annual Mortality of the City of Wheeling for Ten Years, and from what Diseases.*

	1854.	1855.	1856.	1861.	1862.	1863.	1864.	1865.	1866.	1867.
Bronchitis	...	2	2	1	5	5	6	3	6	...
Cholera infantum	46	33	27	15	24	30	24	25	16	10
Cholera morbus	15	...	4	3	4	2	4	2	5	3
Cholera	102	...	...	...	...	...	...	...	...	...
Consumption	45	51	58	41	36	35	37	37	29	34
Convulsions	36	46	33	28	34	28	31	28	13	23
Congestion of Brain	5	8	14	1	8	4	2	4	2	9
Croup	4	7	15	5	6	7	7	1	5	4
Diarrhœa	28	15	7	8	7	5	7	10	...	1
Diphtheria	...	...	1	22	20	22	...	7	3	2
Disease of heart	17	6	7	2	2	4	8	4	6	8
Dropsy	19	17	2	10	10	6	...	8	11	6
Dysentery	12	7	2	1	2	9	7	5	3	2
Fevers, scarlet	31	39	8	18	39	18	32	31	2	1
" typhoid	40	35	10	9	35	14	29	42	7	4
Whooping-cough	...	21	2	3	2	4	...	4	...	7
Inflammation, bowels	26	7	30	21	15	7	15	14	15	10
" chest	28	24	3	37	29	32	36	26	16	33
" brain	9	3	12	8	...	30	17	15	6	8
Marasmus	20	12	11	9	12	11	11	23	9	8
Measles	15	2	...	5	4	6	18	4	...	...
All other causes	176	200	118	99	100	110	153	150	158	149
Total annual mortality	674	535	367	346	394	389	444	443	311	322
Ages—1 to 10 years	372	359	217	202	243	238	217	233	160	175
Adult age	302	176	150	144	151	151	227	210	151	147

TABLE XVII.—*Showing the Deaths in the City of Wheeling for Seven Years, for each Month and Season, with the Annual and Total Deaths.*

	Jan.	Feb.	Mar.	April	May.	June	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
1861	28	30	36	31	28	25	41	24	30	24	28	21	346
1862	32	27	39	34	32	36	58	41	23	33	15	24	394
1863	31	25	33	30	38	25	20	52	29	25	37	44	389
1864	28	25	36	45	37	42	50	46	39	37	29	30	444
1865	31	32	49	36	32	50	56	41	36	25	25	32	445
1866	31	32	25	30	20	19	27	29	22	27	26	23	311
1867	28	35	22	31	18	33	31	27	25	17	25	30	322
	206*	209*											
			240	237	205								
Total for spring . .				682									
						230	283	260					
Total for summer							773						
									204	188	185		
Total for fall										577			
												204	
												206*	
												209*	
Total for winter												619	
Average each season for 7 years, per cent.			97.6			110.4				82.4		88.4	
Average annual mortality								378.7					

STORMS IN TWELVE YEARS.

Number and Distribution during the Year.—The whole number for twelve years is 95, as follows:—

Storms accompanied by lightning and thunder—

January . . 0	February . . 1	March . . . 2
April . . . 5	May 13	June. . . . 16
July 12	August . . . 10	September . . 4
October . . . 2	November . . 1	December . . 0

Snow Storms.

January . . 5	February . . 5
April . . . 2	November . . 1

Rain Storms.

March . . . 6	April . . . 4	September .. 2

Hail Storms.

March . . . 1	May 2	August . . . 1

Frost occurred every month in the year; the latest average time in spring is 26th May; and the earliest average time in fall is 23d September.

Aurora Borealis occurred during the twelve years only twice, August 28, 1859, and September 2, 1859.

REPORT

ON

CLIMATOLOGY AND EPIDEMIC DISEASES OF THE DISTRICT OF COLUMBIA.

BY

THOMAS ANTISELL, M. D.,
DISTRICT OF COLUMBIA.

REPORT ON THE CLIMATOLOGY AND EPIDEMIC DISEASES OF THE DISTRICT OF COLUMBIA.

In presenting this report to the Association, the writer has felt considerable diffidence and embarrassment, owing to its meagre information and shadowy outline; to present for a certain year the historical notice of epidemic diseases of the District when no actual epidemic occurred therein, and when it is impossible to accurately contrast this condition with that of any other year when no official records, municipal or otherwise, have been kept to indicate the nature and extent of disease in years gone by, the embarrassment becomes apparent, and nothing remains as the basis of a report save a notice of the topography and climatic peculiarities, with such remarks upon disease as presented themselves to the experience of the writer or those of his professional brethren whom he consulted.

With this preliminary deprecatory statement the telluric and atmospheric conditions of the District will be noticed.

With boundaries defined by political considerations, the District of Columbia presents to the eye of the geologist no natural features which throw it out into relief distinct from the neighboring States.

Placed at the limit of tidal water of a large river, at a point where in its downward course it has succeeded in cutting its way out of and finally leaving behind a region of crystalline and hard metamorphic gneissose rock, a considerable portion of the present District occupies the site of the ancient river bed which, before it cut its present channel so deeply, once occupied all of the land embraced between Rock Creek on the west and the eastern or left bank of the Anacostia River. Kendall Green, Eckeryton, Kalerama, and Boundary Street formed the shores of this former water course, which, as the water lowered, in time threw a bank between the currents of the eastern branch of the Potomac, forming a sand bank or bar in the shallowing water now known as

Capital Hill; and so by further retiring of the waters and drainage the contour of the surface acquired its present outline.

The whole District, then, east of Rock Creek is underlaid by alluvium consisting of beds of gravel, sand, and stiff clay alternating, the beds of fine gravel predominating. This alluvium is probably from sixty to eighty feet in depth, nearly horizontal in deposition, and, occupying the lower land of the District, makes little mark on its topography. Below the alluvium are pleiocene and miocene beds, chiefly made up of unconsolidated clays or semi-cemented sand, with few fossils imbedded and none in any state of preservation. These sandy clays and conglomerate pebbles appear at the Maryland line north and east of the District. Through these soft beds both the Potomac and Eastern Branch have cut their way. Along the line of Rock Creek the quaternary beds disappear, and the alluvium abuts on degraded granite and metamorphic gneiss, which occupy the District thence to its western Maryland border. Heavy clays cover it up in its hollow spots. These metamorphic rocks dip deeply eastward, and on their slope rest unconformably the quaternary and alluvial beds described.

Some parts of the bed of the river Potomac, below Georgetown, are stated to be seventy feet deep, but less than half that would represent its greatest ordinary depth; the clay beds are therefore cut through sufficiently deep to allow of draining of the underground soil, and were it not for the higher level of the plateau in the northern part of and outside of the District, the soil would be exceedingly dry; as it is, much of the draining of this higher land passes down and soaks the beds underneath the city, accumulating close to the river under what is called the island, and as it can only escape at low tide or whenever the downward pressure of the subterranean water can antagonize the tidal current of the river, during seasons of much rain the strata remain waterlogged for some weeks together. This condition appears to be the chief cause of the malarious diseases of the island; for during spring and fall, especially in spring, the island is affected with intermittent to a greater extent than any other section of the city.

The temperature and rain fall of the District have been thoroughly examined. Meteorological observations extending for years have been taken at several points and within the neighborhood of the District in Maryland. Some of this has been carried out by the Smithsonian Institution, but the great bulk of the observations and almost all on record in print have been made under the control of

the Surgeon-General's Bureau of the War Department. Of these many meteorological records the writer has freely availed himself. The tables were collated and edited by the late R. H. Coolidge, Surgeon U. S. A., once an active member of this Association.

As most of the observations were made in this city, the statements hold good only in fact for such; but as the District is so limited, no appreciable change occurs, and the statement may be taken as representing the condition of the whole District.

The city of Washington lies in latitude 38° 53′ 39″ N., in longitude 77° 2′ 48″ west of Greenwich, and has a mean altitude from 50 to 100 feet above tide level.

The mean temperature of the seasons, and for the year, taken as the average of fifteen years, is—

Spring	Summer	Autumn	Winter
55°.77	76°.33	56°.43	36°.05

for the year, 56°.14.

From this it will be seen that the mean of spring and autumn temperature does not differ more than one degree, and that the mean temperature represents almost exactly that of the whole year.

The annual rain fall observed during several short series of years averages 41.20 inches, thus distributed—

Spring	Summer	Autumn	Winter
10.45	10.53	10.15	10.07

While spring and autumn thus present as nearly an equal rain-fall as temperature, when the constituent monthly rain-fall is inspected it will show that greater variability in the season of spring occurs than in the autumnal months; thus—

	March.	April.	May.	Sept.	Oct.	Nov.
The average rain fall in inches . .	2.56	4.03	3.86	3.52	3.55	3.68
" range of temp. of same period	17°.8	9°.5	14°.4	9°.8	11°.9	14°.6

While the total rain fall is thus pretty equally distributed through the season, the amount which falls occasionally at one time is very great; thus, within a period of twenty-four hours, 2½ inches of rain may fall, a quantity nearly equal to that of a whole month, leaving dry spells of two and three weeks' duration.

The distribution of the winds is very diversified. Speaking enerally, west and north winds prevail. When we examine into

the frequency of these winds in season, the following relative occurrence is presented:—

Spring,	N., N. E., W.	Autumn,	S. W., S. E., N. W.
Summer,	S. W., S., N. E.	Winter,	N. W., W., N. E., S. W.

Those winds occurring most frequently are placed first.

The distribution reduced to months is as follows:—

March,	N., N. E., W.	September,	N. E., S. W., W.
April,	N., N. E.	October,	S. E., S., S. W., N. W.
May,	N., W.	November,	S., S. W., N. W.
June,	N. E., N. W.	December,	S. W., N. W.
July,	N. E., S. W.	January,	N., W.
August,	N. E., S. W.	February,	N., N. E., W., N. W.

Situated as this District is between the Northern and Southern States, it might be expected to partake of the nature of the climate of both sections. In occasional years the summer instead of being scorching, dry, and clear, is muggy, cool, and moist, like an intertropical season; and, on the other hand, the winter is often as severe and prolonged as in the latitude of Middle New York or Michigan.

The maximum summer heat rarely exceeds 96°, occasionally going up for a few hours to 102° Fahr., and the maximum depression of the thermometer in winter is rarely below 10° below zero once in the season, or 10° above zero three or four times within the same month.

Heavy snows are not frequent; more commonly the ground is exposed during the coldest winter months, which are really January, February, and March, and when snow and rain fall with south and westerly winds, it is but the continuation or extension of these phenomena from more southerly points; almost all our storms, except in spring, coming to us from the south. As the southerly wind is loaded with moisture and blows pretty constantly in August, we have in that month the maximum of summer heat oppressive and enervating. The maximum of cold is generally in February or March, often preceded by a week or ten days of balmy, genial weather, which brings out the buds and leaves of early vegetation only to be nipped off by the sudden freezing up of everything by the coming north wind. Such rapid changes of temperature are not without injurious influence on those whose respiratory organs are delicate. The climate is, in fact, dependent on the winds; as long as the south wind prevails it is warm and genial; when the north wind is in the ascendant it is wintry and

unpleasant, and this contest of winds lasts the year through. The west wind is always cold and generally dry; coming down the valley of the Potomac it seems to acquire increased momentum as it descends through the chasms in the Alleghanies, and delivers itself with sweeping force, causing in a few hours the thermometer to fall ten, fifteen, twenty, and twenty-five degrees, and determining a northern climate so long as it lasts.

When the south wind prevails in late spring, summer, and autumn, it reaches the District after having traversed the low counties of Virginia, and, crossing the river, is believed to carry with it the germs of malaria, which it spreads over the whole of that part of the city of Washington which lies only a few feet above the water-level of the Potomac.

During the past year there have prevailed no diseases of a strictly epidemic character. In the summer of 1867, near its close, a form of mild continued fever prevailed over a certain portion of the northern section of this city, in the Second and Third Wards chiefly. The mortality was very slight, and after remaining a few weeks disappeared. Various causes were assigned as producing this fever, according as it was described by the physician as typhoid fever, or as mild continued fever, such as defective soil drainage, decaying animal matter, and too crowded dwellings.

Indeed, as regards epidemic diseases generally, the District of Columbia has been remarkably free from such during the last three years. During the latter years of the war, the city of Washington had become one vast military camp and depot of quartermasters' trains and provisions, so that a city which only numbered little over 60,000 people in 1861, in 1863 and '64 had a population, augmented by transient bodies of military and permanent trains supplied with the full quota of horses and mules, which reached to over 150,000 people.

A large amount of the military element camped on vacant squares and lots around the city, and sometimes squatting even in its very centre; the night bivouac breaking up only to be replaced by a similar party. This kept up for nearly two years, to which was added a domiciled population overcrowded by influx of strangers who stopped at private houses, since boarding-houses and hotels were always filled to overflowing, naturally brought on a train of zymotic diseases, as smallpox, scarlatina, and continued fever, which were very prevalent during the period stated.

This state of society having passed away at the close of 1864, and

an impetus having been given toward the permanent enlargement of the city (since 1866), more dwelling accommodation has been afforded for the increased and permanent population, and with it has disappeared all well-marked traces of crowd poison. The plan on which the avenues and streets of Washington have been laid out, however unfriendly it may be to social intercourse, or unfavorable to commercial advantages, is certainly one most conducive to public health, and so long as no importation of an epidemic from outside occurs, so long will we be free from internal sources of attack of zymotic disease.

Malarial disease, though not usually severe in some years, shows itself in well-marked and severe attacks. Typhoid fever, if it may be set down in this category of disease, may occur at any period of the year, but is perhaps more prevalent in autumn. The intermittent occurring in spring and bilious remittent near the river edge in August and September. The diseases of malaria prevail here, as elsewhere in this latitude, more in spring and autumn, more in autumn than in spring. This is partly due to the prevalence of southerly winds at this season, and partly to the rapidity of the change in daily temperature in autumn over any season of the year. The southern and northwestern portions of the city suffer most. In the District the edge of the river is always productive of malarious disease, and its influence extends considerably back of the river bank; while on the high land of the District, away from the river bottom, malarious disease shows itself dependent rather on the state of the weather and the season than on the locality, which latter appears to be the ruling condition of this city and Georgetown.

It appears to the writer that the typical character of typhoid fever in this District is losing its distinctness within the last few years, being at times not distinguishable from a mild continued fever (Synochus of Cullen), at times a nervous continued fever (Synocha), and occasionally marked with intermittent so as to be hardly recognizable; the pathologic diagnostic character, inflammation of the agminated glands, is often wanting. Pneumonia is a very common disease in late spring, and very fatal to elderly persons.

No mortality lists having been kept in this city until within the last three months, the reporter is unable to submit the various causes of mortality, nor the actual percentage of deaths. However, the death rate may hereafter be found to compare with an

equal population in other cities. The rate of sickness to the total population must be certainly very much less, for it has been a common remark of our medical men that they have had abundant leisure within the last year.

The writer, before closing this necessarily incomplete report, desires to allude to one cause of death, which, as it is preventable to a certain extent, deserves the thoughtful attention of the profession—it is *phthisis pulmonalis.* I believe more than the usual share of deaths occur, within the District from this disease, which may be in part due to the peculiarity of our climate, want of equality, and the occurrence of strong winds, which, moving eight or twelve hours on a stretch, elevate or lower the atmospheric temperature, so that tuberculous lungs are immediately made cognizant of it. Certain I am that, when tubercles are well formed in a lobe, or a whole lung, the District of Columbia is no place for that patient to live in. Death within the year is almost inevitable from the constant irritation of the air-cells by frequent and severe vicissitudes of wind and temperature. Phthisis is not, however, produced to any large extent by these conditions of climate or soil; a large proportion of the deaths from phthisis occurs among those who are neither permanent citizens nor a transient population; they are found among that class commonly known as government clerks; many of them young men brought down from their homes in colder climates, both north and northwest, by the glittering prize of $1200 or $1400 per year, with which they hope to do everything, and find after some experience that these sums are worth less in Washington than elsewhere. Coming from rural districts and out-of-door occupation, they suddenly find themselves in a crowded room in the middle of a city, seated at a desk or performing little muscular exertion for seven hours daily, often without sunlight to look at; they are jaded, without wholesome fatigue in the day, and in the evening relax themselves by city amusements, which are both sedentary and stimulating. This mode of life being followed for several months, is it wonderful that a young frame, whose organization is not yet consolidated, should feel the injurious influence of overheated and overcrowded rooms with monotonous and uninteresting occupation? In six or eight months the appetite fails, the weight and strength diminish, an unhealthy blood is formed, and pulmonary hemorrhage occurs, and in six or eight months more a vacancy occurs by the death of him who, perhaps,

not more than twelve or sixteen months previous, was the apparent type of health.

I am confident that the physicians of this District will coincide in the view here expressed concerning the mortality from this disease; one-half of which arising from social causes should be clearly separated from the unavoidable causes of mortality, namely, the peculiarities of climate.

REPORT

ON

MEDICAL TOPOGRAPHY, METEOROLOGY, AND EPIDEMIC DISEASES OF TEXAS.

BY

T. J. HEARD, M. D.,
GALVESTON, TEXAS.

REPORT ON MEDICAL TOPOGRAPHY, METEOROLOGY, AND EPIDEMIC DISEASES OF TEXAS.

THE investigation of the extent to which the human family is affected in the enjoyment of health and the preservation of life, by physical and natural causes, opens up a wide field of inquiry in which medical geography or topography and meteorology unquestionably assume the first place in importance. A knowledge of the physical conformation of any part of the earth's surface, and of the meteorological agencies to which it is exposed, affords through a comparison of well-known phenomena in different countries, a means of arriving at important and valuable conclusions. That the chemical character of the soil varies with the geological systems or formations, and that the morbific agents are as varied as these, are too evident to require argument. We find from observation that though diseases may belong to the same family, yet they are distinguished by certain differences as apparent as are the physical characteristics peculiar to the regions where they respectively prevail. Since this connection and dependence are everywhere observed to exist, the conclusion follows that there will be no further advance in the science of ætiology without the aid of geology and chemistry. A sketch of the medical topography, and also of the geological structure of Texas, together with such brief notices of the character of the soil of its different regions as the limits of the paper will allow, may, it is hoped, throw some light on the habits and character of its diseases. The State of Texas extends from 26° to 36° 30′ north latitude, and from 94° to 106° west longitude. The State is about 600 miles in length, with a mean width of perhaps 550. The Trinity and Sabine Rivers near the eastern border, the Brazos and Colorado near the centre, and the Guadalupe and Rio Grande on the west, have their origins in the northern portion of the State, and run nearly its whole length from north to south. These rivers are so tortuous in their courses

as frequently to vary many miles from the line of their direction to the Gulf. The soil and geological features are strikingly diversified, giving rise to vicissitudes of temperature and phases of disease widely different and varied. The writer will endeavor briefly to point out those distinctive features that are observable in the terrestrial formations of the respective regions into which the State is divided. A low plain, from 50 to 80 miles wide, very slightly ascending towards the interior, belts the entire coast; thence, the surface rises and becomes undulating and then broken and hilly, till it reaches the high table lands of the vast plateau, known as the Llano Estacado, or staked plain, more than 2000 feet above the ocean level. The soil throughout the low and extensive bottom region along the rivers and near the seaboard, is of recent formation, and alluvial. While the abundance and richness of the products of this region are such as to constitute it the cradle of agricultural wealth, the great prevalence of the severer forms of miasmatic fevers has designated it as the bed of those enervating poisons which have so often struck down the youth and vigor of the country and added new terrors to southern disease. The rolling or undulating lands in the belt of country just north of this region are also alluvial, but with an argillaceous marl underlying them as a subsoil, and designated in popular language by the term "joint clay." The great prairie region is of cretaceous formation; its most perfect type being found in the great cereal region of the northwestern part of the State, of which Dallas County may be taken as a central point. Beyond, in latitude 33°, the cretaceous formation abruptly terminates in a continuous ridge or bluff from 100 to 200 feet in height, extending from N. E. to S. W., and embracing a district bounded by the lower border of the Upper Cross Timbers and the Brazos River on the south, and Red River on the north. This region may be considered as embraced in the coal measures, with the exception that at a distance of perhaps 150 miles from the lower border of the Upper Cross Timbers, a remarkable belt of forest, extending diagonally nearly across the entire State, there juts in from the northeast the Washita Mountain range. This consists of isolated peaks of granite and porphyry, which tower to a height of 500 to 1000 feet. The chief outcrop of the carboniferous strata is at the lower border of the Upper Cross Timbers, while considerable beds of lignite mask the southern limits of the cretaceous formation. At this latter point are also found immense quantities of petrifactions, and the organic

remains of extinct animals, as the mastodon, mammoth turtles, etc. While in the cretaceous strata the rocks are made up of marine shells, above, in the region whose limits have been already defined, they are mostly composed of iron and gypsum, which, undergoing attrition and disintegration by the action of water, are the great fertilizers of the Brazos, Colorado, and Red River lands. The great plains consist of stratified clay and cretaceous marls.

The writer will merely glance at the subject of meteorology, for as yet the number of observers in this State is too few to institute comparisons of different localities full enough for the deduction of positive inferences. By way of introduction to this branch of my subject, a few remarks of a general character may not be devoid of interest.

The climate of the State is subject to great and violent changes, the range of the thermometer not unfrequently in the winter extending over as much as 50° in a few hours. The prevailing winds from April to November are from the south and southeast. These are the trade winds, which blow with characteristic regularity, and greatly mitigate the otherwise intense heats of summer. From November to April the north and northeast winds often give rise to very great and sudden falls of temperature. The "norther," as is well known, constitutes the peculiar and distinguishing feature of the winter climate of Texas. Nature has thrown up no mountain ranges sufficiently continuous to interpose a barrier to the winds that, bursting their prison doors in the far icy north, sweep unchecked over her vast level expanse. In the intervals between the northers, whose duration seldom exceeds two or three days, the temperature is mild and genial. By comparing the temperature, dryness, and moisture, winds, etc., in the subjoined tables, meagre and imperfect though they are, the reader may draw his own inferences and corroborate his own theories on the diseases of this State. For the following meteorological register for the year 1867 I am indebted to Dr. C. H. Wilkinson, House Surgeon of the City Hospital of Galveston.

Meteorological Observations at Galveston, Texas.

By C. H. WILKINSON, M. D.

Latitude, 29° 18′; longitude, 95° 01′.

Time in weekly statements.	Mean temperature.			Rain in inches.	Winds, prevailing direction of.
	7 A. M.	2 P. M.	9 P. M.		
From Jan. 1 to Jan. 7, 1867	42	52	49	1.1	N. W.
" " 7 " " 14 "	57	66	57	0.0	S. E.
" " 14 " " 21 "	53	60	53	0.0	S. E.
" " 21 " " 28 "	49	55	52	0.5	N.
" " 28 " Feb. 4 "	53	65	59	sprinkle	S. E.
" Feb. 4 " " 11 "	48	52	48	0.06	N. E.
" " 11 " " 18 "	58	63	59	sprinkle	S. E.
" " 18 " " 25 "	59	62	57	0.0	N. E. & S. E.
" " 25 " March 4 "	66	68	62	0.72	S. E.
" March 4 " " 11 "	51	57	46	...	N.
" " 11 " " 18 "	47	52	47	sprinkle	N.
" " 18 " " 25 "	58	65	58	...	S. E.
" " 25 " " 31 "	58	61	55	0.7	N. E.
" April 1 " April 7 "	58	67	59	sprinkle	S. E.
" " 7 " " 14 "	63	70	64	1.5	S. E.
" " 14 " " 21 "	66	76	66	0.0	S. E. & S. W.
" " 21 " " 28 "	67	74	68	sprinkle	S.
" " 28 " May 5 "	66	76	65	5.00	S. & E.
" May 5 " " 12 "	66	78	67	0.00	S.
" " 12 " " 19 "	74	83	73	0.50	S.
" " 19 " " 26 "	71	79	72	...	S.
" " 26 " June 2 "	77	85	76	0.9	S.
" June 2 " " 9 "	79	86	77	...	S.
" " 9 " " 16 "	81	85	80	1.4	S. E.
" " 16 " " 23 "	83	87	86	0.33	calm
" " 23 " " 30 "	79	85	82	1.66	calm
" July 1 " July 7 "	82	85	82	1.5	S.
" " 7 " " 14 "	83	88	82	0.6	S.
" " 14 " " 21 "	83	93	83	...	
" " 21 " " 28 "	86	95	86	...	calm
" " 28 " Aug. 4 "	83	91	84	0.7	N. & N. E.
" Aug. 4 " " 10 "	82	91	81	1.5	S. E.
" " 10 " " 15 "	82	94	83	...	N. & calm
" " 15 " Sept. 1[1] "	...	...	...	...	
" Sept. 1 " " 7 "	81	92	81	.5	S. E.
" " 7 " " 14 "	82	90	83	...	N. & N. E.
" " 14 " " 21 "	80	86	81	3.25	S. E.
" " 21 " " 28 "	75	87	82	...	N.
" Oct. 1 " Oct. 7 "	73	80	78	rain	E. & N.
" " 7 " " 14 "	74	81	76	...	N. E.
" " 14 " " 21 "	74	81	73	...	E.
" " 21 " " 28 "	68	72	69	...	N.
" " 28 " Nov. 4 "	62	67	65	...	S. E. & S. W.
" Nov. 4 " " 11 "	65	70	70	...	E.
" " 11 " " 18 "	61	68	66	...	N. E.
" " 18 " " 25 "	66	69	67	...	E.
" " 25 " Dec. 2 "	61	63	63	...	N.
" Dec. 2 " " 9 "	66	68	67	...	E.
" " 9 " " 17 "	58	66	63	...	N. W.
" " 17 " " 24 "	60	61	68	...	E.
" " 24 " " 31 "	62	63	60	...	E.

[1] No tables kept. Yellow fever at its greatest height.

The only other meteorological data I can find for Galveston are contained in Blodget's "Climatology of the United States." The following mean temperatures for each month of the years 1851 and 1852 will be found on page 44 of that work: January, 48°.1; February, 58°.0; March, 63°.5; April, 70°.0; May, 78°.7; June, 80°.7; July, 83°.0; August, 83°.3; September, 78°.3; October, 73°.1; November, 60°.2; December, 55°.6; or the same results differently expressed: Spring, mean temperature 71°.0; summer, mean temperature 82°.5; autumn, mean temperature 70°.2; winter, mean temperature 53°.8; mean temperature of the year 69°.4. Again on page 53 of the same work are given the following mean temperatures for 1842, viz: spring, 77°.23; summer, 87°.67; autumn, 70°.60; winter, 60°.44; year, 73°.99. The following observations by Dr. William A. East, of Anderson, Grimes Co., have been furnished me by him.

Meteorological Record, Anderson, Grimes County, Texas.

By W. A. East, M. D.

	Thermometer.			Barometer.			Course of the wind.	Force of the wind, ratio 1 to 10.	Number of rainy days.	Rain in inches.
	Max.	Min.	Range.	Max.	Min.	Range.				
January,	58.0	54.0	19.0	30.00	30.10	0.20	N. E.	2.00	6	3.60
February,	64.0	60.0	22.0	30.31	30.06	0.31	N.	4.16	9	3 54
March,	74.0	63.0	22.0	30.29	30.01	0.26	N. E.	3.10	2	0.17
April,	89.0	65.0	25.0	30.27	26.29	0.28	S. E.	2.75	4	0.57
May,	87.0	64.0	24.0	30.24	29.16	0.31	S.	2.25	3	2.42
June,	94.0	78.0	17.0	30.19	30.19	0.32	S. by E.	3.00	4	5.14
July,	92.0	76.0	14.0	30.21	30.21	0.19	S. by E.	2.29	2	2.11
August,	93.0	78.0	15.0	30.20	30.20	0.07	S.	1.19	6	2.14
September,	90.0	79.0	13.0	30.22	30.22	0.15	S.	1.19	2	3.16
October,	89.0	77.0	16.0	30.27	30.27	0.31	S. by W.	2.20	0	0.00
November,	74.0	67.0	22.0	30.16	30.16	0.27	N. W.	2.71	2	2.40
December,	68.0	61.0	12.0	30.19	30.19	0.16	S. by E.	2.64	4	4.01

The following thermometrical table showing the highest and lowest range of the thermometer at Austin City, the State Capital, in each month from 1858 to 1868, has been prepared by J. Van Nostrand, A. M., Superintendent of the Deaf and Dumb Asylum.

Month.	1858.		1859.		1860.		1861.		1862.		1863.		1864.		1865.		1866.		1867.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
January . .	72	33	74	22	76	18	79	23	86	23	78	28	79	06	73	20	78	21	78	17
February . .	86	26	79	32	80	24	78	27	88	25	79	30	80	23	80	32	84	19	84	25
March . .	79	27	93	36	85	37	86	39	97	28	85	43	84	32	80	26	83	44	85	21
April . .	91	48	96	46	92	51	90	52	87	46	90	45	89	47	83	51	89	41	92	46
May . . .	91	55	95	61	101	60	89	57	91	60	99	60	96	58	103	51	93	57	92	58
June . . .	91	64	101	73	102	76	96	73	103	71	98	69	96	67	96	69	95	62	97	66
July . . .	96	72	99	74	107	77	99	76	104	74	99	69	99	71	95	75	96	71	97	71
August . .	98	70	101	72	100	73	100	71	103	74	99	68	99	71	106	75	96	68	98	72
September .	97	61	98	60	94	59	94	54	97	63	97	59	98	66	98	70	91	55	94	65
October . .	90	51	87	40	93	42	91	40	96	31	86	30	88	43	90	42	87	47	96	45
November .	75	27	83	24	83	24	85	34	84	33	85	20	80	25	83	36	83	36	83	28
December . .	71	22	77	10	80	25	81	32	75	30	76	17	87	19	82	18	78	30	86	28

The annual amount of rain which fell according to the same authority, was, in 1858, 36.37 inches; in 1859, 30.24 in.; in 1860, 29.61 in.; in 1861, 28.69 in.; in 1862, 23.17 in.; in 1863, 33.85 in.; in 1864, 25.03 in.; in 1865, 38.40 in.; mean average for eight years, 30.67 in. The rain fall in 1867 as furnished me by Dr. A. H. Parrish, of Austin, was as follows: January, 0.00 in.; February, 0.72 in.; March, 1.48 in.; April, 1.45 in.; May, 1.30 in.; June, 5.05 in.; July, 0.65 in.; August, 3.27 in.; September, 6.41 in.; October, 2.08 in.; November, 2.98 in.; December, 1.80 in. Total amount for 1867, 27.19 inches. The data quoted below were reported for, and appeared in, that valuable and unique publication, the Texas Almanac, for 1868, by Dr. Edward Merrill, of Waco, Texas.

Meteorological Register.

Latitude, 31° 35′; longitude, 96° 50′. Observations at 7 A. M., 2 P. M., and 9 P. M.

	Date.	Max. temp.	Date.	Min. temp.	Mean temp.	Rain in inch's	Remarks.
APRIL.							
1st ten days,	3	80°	1	40°	61°	1.10	Frost on the mornings of the
2d ten days,	16	92	11	48	68	1.50	1st and 10th. Prevalent winds,
3d ten days,	21	94	26	60	69	3.20	S., S. E., and E. Velocity of
For the month,	...	...	...	...	66	5.80	wind per hour, 4 miles.
MAY.							
1st ten days,	9	92	1	51	70	.40	Prevalent winds, S., S. E., and
2d ten days,	15	87	15	62	73	4.00	E. Velocity of wind per hour,
3d eleven days,	29	90	21	57	74	2.10	4 miles.
For the month,	...	...	...	...	73	6.50	
JUNE.							
1st ten days,	4	94	1	66	80	1.70	Prev. winds, E. and S. E. Vel.
2d ten days,	18	99	11	73	86	.40	of wind p. hr. 3 m. Thermome-
3d ten days,	21	101	21	75	84	.70	ter higher on 21st than any-
For the month,	...	...	...	...	83	2.80	where reported in this country.
JULY.							
1st ten days,	2	95	2	74	82	2.20	Prevalent winds, E. and S. E.
2d ten days,	19	96	11	79	86	0.00	Velocity per hour, 4 miles.
3d eleven days,	22	99	30	77	87	.10	
For the month,	...	...	...	...	86	2.30	
AUGUST.							
1st ten days,	11	96	3	73	83	1.00	Prevalent winds, N. and E.
2d ten days,	13	97	17	71	85	.40	and S. E. Velocity of wind per
3d eleven days,	23	97	21	74	83	2.60	hour, 4 miles.
For the month,	...	...	...	...	84	4.00	
SEPTEMBER.							
1st ten days,	8	92	10	64	81	1.30	Prevalent winds, S. E., N. E.,
2d ten days,	15	98	11	66	81	.50	and E. Velocity of wind per
3d ten days,	29	94	24	62	76	0.00	hour, 4 miles. On the 10th, first
For the month,	...	...	...	...	81	1.80	"Norther."
OCTOBER.							On the 14th, at 4½ P.M. a great
1st ten days,	4	94	10	57	76	.40	cloud of grasshoppers appeared,
2d ten days,	12	90	11	57	72	.70	going with the wind, from north
3d eleven days,	22	77	30	43	64	1.00	to south. They have destroyed
For the month,	...	...	...	...	70	2.10	the gardens and all early planted wheat.

The observations of Dr. Merrill, as will be seen, extend only over a portion of the year, viz, from April to November. This period includes, however, that part of the year, which, being most productive of disease, will afford almost equal interest to the Association, as if it had extended through the whole year.

The foregoing embrace all the reliable data the writer has been able to obtain on this branch of his subject. Of Texas it may be said without exaggeration or untruth that the general salubrity will compare advantageously with that of other States of the same

latitude. In ordinary seasons unattended with an unusually high range of temperature or unusual amounts of rain, the endemic diseases are intermittent and remittent fevers of mild form, and easily amenable to treatment. The intermittents are mostly of the tertian or quotidian type, and very manageable except from gross imprudence. Remittent fevers are generally attended with a high grade of excitement, which expends its force chiefly on the brain or abdominal viscera, but gives way readily to appropriate treatment. It is only in seasons of extraordinarily high temperature and heavy and continuous rains that the pernicious or congestive type of these fevers prevails. It is a fact worthy of remark that only in the lowlands of the cretaceous formation does this type prevail, and not in the uplands; while in the alluvial region the fevers are as malignant in the uplands as in the bottoms. This is owing to the clayey subsoil of the latter before alluded to, through the segments of which the water during rains percolates instead of draining off the surface, and thus forms marshes. This soil, so retentive of water, holds it with too great tenacity for evaporation to go on rapidly, and thus, as may be readily understood, proves in wet seasons with high temperature, a more certain and prolific source of disease than any other formation in the State, the low alluvions of the river bottoms not excepted. Already has much valuable medical history been lost to the medical profession in the southwestern section of the United States. Having spent nearly thirty years in Texas in close and unvarying observation, I trust I may without egotism lay claim to some knowledge of its early medical history. I propose, however, on the present occasion, only a very brief synopsis of it. The diseases of Texas previous to 1843 were generally sthenic in character, and often required the use of the lancet. Since that period it has almost entirely ceased to be resorted to. In the latter part of 1842 heavy rains began and continued with only short intervals of dry weather until 1845. The year 1843 was remarkable beyond any year before or since for the great amount of fever that prevailed. Fevers of the algid grade were first brought under my observation this year. In the latter part of 1844 and the early part of 1845, a very wet, cold, and variable season, there prevailed an exceedingly severe epidemic of erysipelatous fever, known in popular phraseology as "the black tongue." It often involved the lungs and gastro-intestinal mucous surfaces and was attended with a fearful mortality. In 1848 occurred the first and only epidemic of scarlatina known in

this State. The disease prevailed to a considerable extent. Occasionally rubeola has prevailed, but never to any great extent, and generally of mild character. In 1850, cholera prevailed with very great fatality during the months of March, April, and May in Houston, San Antonio, and on the lower Brazos River. This disease had raged fearfully at the two last named points in the ever memorable year 1833. In the autumm of 1851, dengue prevailed for the first time, and extended over a great part of the densely populated section of the State. It was clearly infectious. In 1855 it again occurred, but in this instance it was restricted chiefly to the cities and large towns, more especially those in which yellow fever had prevailed the previous year. In 1860, dengue again prevailed, especially in such localities as had been visited by yellow fever in 1859. In the winter and spring of 1860-61 for the first and only time, diphtheria prevailed epidemically. Sporadic cases have occurred every year since. In the summer of 1866, cholera was introduced into the State through Galveston by infected United State troops brought from one of the islands in the bay of New York, where they had been stationed. The disease was of only moderate prevalence and mortality in Galveston, being confined chiefly to the troops and to persons residing near their quarters, and to the negro population. The better classes of society escaped almost entirely. It may not be undeserving of mention in this connection, the singular immunity enjoyed by Galveston from this disease during her whole history. This is generally and doubtless correctly ascribed to the universal use of cistern water both for drinking and culinary purposes by her population. The disease extended into the interior of the State, and prevailed severely at Houston, San Antonio, and a few other points of minor importance. In all cases the mortality was great and marked among the negroes. Typhoid fever was unknown in Texas before 1850. During that and the succeeding year it was of extensive prevalence, but of mild grade. With this exception, the health of the State was during this period excellent. Since 1851 no epidemic has occurred, but sporadic cases occur every year.

That form of fever usually denominated yellow fever, from the characteristic color of the skin, will engage my attention to the limits I have assigned to this paper. I will first present a tabular statement of the epidemics of this disease which have visited the city of Galveston, with the estimated population and mortality at each successive period from its first foundation down to the epi-

demic of 1867, of which I propose to give a more detailed and particular account.

Year.	When declared epidemic.	Population of city.	Mortality.
1839	Sept. 20th,	1,000	250
1844	July 5th,	6,000	400
1847	Oct. 1st,	6,000	200
1853	August 9th,	8,000	535
1854	August 4th,	8,000	404
1858	August 28th,	10,000	373
1859	Sept. 17th,	10,000	182
1864	Sept. 1st,	5,000	259
1867	July 28th,	22,500	1150

In the foregoing abstract no mention is made of the epidemic prevalence of yellow fever in 1863 at Sabine Pass, Matagorda, and Houston. The disease began late in the season, was of mild type, and not attended with much fatality. I will here call attention to a fact which I regard as not less important than true. Previous to 1853 yellow fever was considered a disease peculiar to the towns on or near the seaboard, and no apprehensions were entertained of its infectious character or of its spread into the interior of the State. Before that period, although cases of yellow fever contracted in New Orleans, Galveston, or Houston, were often conveyed into the interior, the disease was not propagated either by personal contact, fomites, or otherwise. But in asserting that since the period named the disease has been highly communicable, especially by fomites, I not only give expression to my own convictions but to the universal medical sentiment of the State. Whether this results from another and different morbific agent, or the intrusion of a modifying influence into the original yellow fever poison, I confess myself unable to determine, but, whatever the explanation may be, the fact is indisputable. I shall now proceed to give some account of the yellow fever epidemic of 1867, that most fatal and malignant form of this remarkable disease, which has so recently swept with its deadly wing over the fairest, the most fertile, and populous portion of the State. I will take up its history from its initial point, Indianola, near the western seaboard of the State, where the disease appeared about the 20th of June, 1867. For the following account of its origin and prevalence I am indebted to Dr. J. M. Reuss, of that place.

"INDIANOLA, situated on the west side of Matagorda Bay, about eighteen miles from the sea-coast, a town of about twenty-two

hundred inhabitants including Oldtown, about three miles above, is almost entirely surrounded by salt water, being on a sort of peninsula, formed by Powdertown Bayou on its southwest, a narrow outlet of the bayou running south to north, the so-called blind bayou northwest, and Matagorda Bay east of the town. In its rear are flats which, as also parts of the town, are subject to overflow. These flats, as well as the bayous in the rear, were overflowed before the occurrence of yellow fever by fresh water, in consequence of continued rains, the water running in from the surrounding prairies. This brackish water, as well as the clearing and filling up of streets in May and early part of June, also the making of a road by the military to their camp, and throwing up a bank, and digging ditches on both sides of this road, by which very offensive emanations from the ground spread by the prevailing south winds over the city, made, no doubt, the atmosphere a very good vehicle for the propagation of epidemic disease, and it required but the germ of yellow fever miasm to inaugurate a fearful epidemic. As at Galveston, this disease never appeared before its being epidemic in New Orleans and imported from there; only in 1862 when two steamers, running the blockade from Havana, arrived at Lavacca in August, the disease was brought here by soldiers, who had visited these vessels. It then broke out about the end of September. In 1867, it appeared about the twentieth of June, shortly after the arrival of a small craft from Vera Cruz, where the fever was then raging. Second-hand blankets, which were brought from there and sold here at auction, were considered the source of infection. Indeed, it was proven by sworn statements, that two young men from the country, who had examined these blankets, and who had only been in town a day, were attacked by yellow fever after they returned home, and one died of black vomit. A negro woman, nursing one of them, also died of well-marked symptoms of yellow fever. This occurred even before the fever broke out here. If this vessel did not bring the fever here, it must have come by a lady from New Orleans, who took sick at a hotel. I did not see the lady until she was almost well; cannot, therefore, say anything more, but that, from the description of her case, I suspected yellow fever. I did not know that there was yellow fever at New Orleans then, until I saw it stated in the *Galveston Medical Journal* of February, 1868, and of course excluded that idea at the time.

"In fact I could not believe at the time, that this epidemic was

yellow fever, it occurring so early and being of so different a type from all I had seen before, until I had seen five or six cases of indisputable black vomit. Already a week or two before the outbreak, I had seen several cases of fever of a rather continued form and more malignant type than the common climatic fevers of this region.

"The first death occurred on the twenty-fourth of June, and in less than a week the whole business part of the town was struck down as by lightning, there being no less than one hundred and twenty-five to one hundred and fifty cases taken during that time, out of a population of less than a thousand.

"In this part of the city it had always broken out before. But as sudden as its onset was its decline in that locality. It reached its acme in about two weeks, and after the fifteenth of July but very few isolated cases occurred in the central part of the city, spreading, however, in all directions to the less densely populated parts, and then travelling house by house slowly, until it reached the suburbs, where it lingered about for over a month.

"Persons nursing the sick for weeks, day and night, would seldom be taken until it came near their habitations or got into their own family. It would seem, then, that the infecting agent is most active at night, and when persons are asleep. Several nurses, active day and night, never took sick until their patients became convalescent, and they got rest and slept in infected houses.

"At Oldtown, three miles distant, to which place the epidemic travelled almost house by house, some of which were separated by an interval of half a mile, it broke out on the thirteenth of October, weeks after the last case had occurred here, although the inhabitants of that place were in daily communication with this city, during the raging of the fever, they coming here in the morning and going back in the evening.

"There occurred only eighteen cases out of two hundred inhabitants, and it lasted but two weeks, owing, no doubt, to the absence of unacclimated persons. Only six adults were taken, all unacclimated.

"In this place, with about two thousand inhabitants, no less than five hundred and fifty to six hundred persons must have been sick; although no certain data can be given, owing to the sudden outbreak and rapid spread. Of six physicians then here, four were taken sick; all recovered.

"The number of deaths from the epidemic may be estimated at from seventy-five to eighty-five.

"In my own practice I have treated two hundred and sixty-three cases, and about thirty in hospital; of the former, with a mortality of a fraction more than nine per cent. This percentage might have even been less, but for the impossibility of giving due attention to all cases, as in the height of the disease but two physicians were able to practise. In hospital practice, the result was not so favorable from various causes incident to all such institutions. Of the thirty cases, six or seven died.

"In general I consider the epidemic of a milder type than we had ever before, compared with five previous epidemics. No acclimated persons were taken, although some old citizens died during the time, and even with some symptoms of the prevailing disease; they were in all cases broken-down constitutions, and affected with chronic disease of some duration.

"In the beginning of the epidemic the temperature was unusually high, the atmosphere sultry, and a marked tendency to congestion of the brain prevailed. The disease was very rapid in its course, some dying suddenly as if sunstruck, in cases even that looked mild in the onset, and when such an issue was not at all expected.

"Particularly from ten A. M. to four P. M. patients had to be closely watched, and the fatal tendency to the brain rigidly counteracted. Delirium then was frequent, the fever at its highest, and all bad symptoms exacerbating. That the high stand of the sun exerted a dangerous influence I do not doubt. A boy of twelve years, lying sick in a room which was unceiled, having a window east, became delirious every morning at about eight to nine o'clock until I moved him into an opposite room lying west, where he remained quiet until the sun had passed its zenith, when he had to be moved back to the former room. This lasted almost a week, until he was quite well.

"After the epidemic had reached its acme, the character changed to a more slow type; a tendency to congestion of the stomach, hemorrhage, and general sepsis appeared more frequent. While in the beginning of the epidemic, when black vomit occurred, it was rather of less quantity, and in quality of a more frothy, tenacious, bloody appearance, it now assumed the character of coffee grounds, and was thrown up in great quantity sometimes for forty-eight hours. Patients now died oftener from exhaustion than hyperæmia. Symptoms of torpor were more frequent than of sthenia. Death occurred mostly on the fifth to the seventh day.

"Contrary to former epidemics, there was a tendency to perspira-

tion with a very marked peculiar offensive smell of a musty kind, often so strong that a yellow fever patient could be detected at a distance of many yards. The same smell was perceptible on the flats in the rear of the city, and sometimes penetrated the houses at night to such an extent that fumigations had to be resorted to.

"There was also in all cases with tendency to action of the skin a considerable vesicular rash, sometimes literally covering the patient, particularly on the neck, chest, and back, resembling the eruption of miliaria or hydra, which was considered rather favorable, except where it assumed a petechial character. The average pulse was rather high, in most all cases above 100. Remissions not unfrequent, though not well marked.

"Black vomit occurring in all stages, not always fatal, particularly in children.

"I saw one case in hospital with black vomit of an evident intermittent type (tertian), the patient throwing it up every other day for several hours. Recovered in six days after taking large doses of quinine and tincture of iron. During intermission, the patient was quite well, walking about the ward.

"The treatment in general was eliminative and expectant in mild cases, diaphoretics, as liq. ammoniæ acetat. or liq. potassæ citrat., with digitalis or veratrum in cases with higher vascular action, with hyoscyamus in cases with nervous excitability. In asthenic cases no treatment would avail. The powers of nature failing from the start, indicated a death blow. Ice was freely allowed by me, found grateful and did no harm, acted to advantage in cases of gastric irritability. Ice was applied to the head in all cases with prominent cerebral symptoms, as well as cups, leeches, mustard pediluvia. Mustard wherever pain was felt, as also in local congestion, acted well.

"Creasote and chloroform seemed to be of benefit in cases of black vomit, or where it was apprehended. Alkalies, such as lime-water with the addition of a little camphor, subdued gastric irritability, flatulency, and greenish acid or bilious vomit of the second stage. The bowels were acted upon by enemata or simple aperients; mercury was only given in cases with foul tongue and offensive breath. Quinine was exhibited in occurring remissions or after the fever had somewhat subsided. I regarded it as beneficial in preventing relapses, which were frequent and easily brought on by imprudence or excitement, often on the 7th or even as late as the 15th day.

"I have here to state that several cases occurred where patients

had a second attack after seven days almost to the hour, after having been convalescent from a light attack, and even up and about, of which second attack they died in less than twenty-four hours.

"Persons after they got through the fever enjoyed usually good health, even more so than before.

"I omitted to state, that much benefit was derived from cold ablutions of the skin, when there was much preternatural heat and perspiration wanting. It was very grateful to the patients to sponge them with very cold water frequently, which often brought on a decline of the fever and perspiration when all other means had failed. So did the cold sheet in some very severe cases. Forcing patients to perspire by hot teas, hot bottles or bricks, and much covering, was very injurious, and cases are not very rare where patients were handled by the nurses in the old accustomed way of former epidemics and put through (but forever). Such treatment always induced delirium, and patients did much better when left to nature. It was particularly dangerous to children who, with but few exceptions, got well without any interference at all. There were several cases here, which were given up and commenced improving from that time. But very few children died. Although many new persons came to this place after the epidemic ceased, and many returned who had left at the outbreak, yet none took the fever after the first of August. A few strangers took sick after that time, but they invariably had contracted the disease at other places, coming from Havana or Galveston. In both places the disease was then at its height. They arrived sick or became so immediately after. This experience will contradict the frost theory. In former epidemics, cases after frost were frequent.

"*Synopsis of Cases and their most Prominent Symptoms.*	*Result.*
"No of cases in all	293
" deaths	32
" cases with delirium	41
" " singultus	11
" " black vomit	17
" " petechiæ	10
" " retention or suppression of urine	17
" " epistaxis	15
" " hemorrhage of other organs	5
" " pregnancy over six months	6
" " confinement during an attack of the epidemic	4
" cases of deaths of parent and fœtus	1
" " deaths of parent alone	1
" cases with congestion or sign of	26."

For an account of the epidemic as it prevailed in Galveston, I am indebted to Dr. S. M. Welsh, of that city, for the following sketch:—

"The city of Galveston is situated on the east end of the island of the same name, lat. 29° 19″, long. 95° 01″, and is the chief commercial city on the seaboard of Texas. Its mean elevation above the surface of the Gulf does not exceed seven feet, and portions of it are liable to inundation when the waters of the bay are moved by east and north winds. Observations have not been recorded of sufficiently extended periods of time to fix with precision the mean temperature. The following averages of temperature for Galveston for the year 1842, are derived from Blodget's valuable work on the Climatology of the United States, viz: Spring, 77° 23″; summer, 87° 67″; autumn, 70° 60″; winter, 60° 44″; mean temperature for the year, 73° 99″. The south wind directly from the Gulf is balmy, with a clear sky. The east and northeast winds are harsher and very humid, and the north and northwest winds, which begin to blow in October, cause great and sudden falls of temperature.

"Preliminary to a history of the recent epidemic of yellow fever, I will briefly allude to the only feature, perhaps of the medical topography of Galveston, which is particularly worthy of mention in connection with the origin and progress of this mysterious disease. In the rear of, and parallel to the principal street, the Strand, which lies along the margin of the bay, originally existed a long, narrow morass, subject to overflow from the tides. Beyond this, the surface of the ground is higher and dryer, gradually ascending to about midway the width of the island. Over this morass, in which a great deal of filth was at an early period suffered to accumulate, and which has been but little elevated from its original level, is now built the most dense and compact portion of the city, constituting Mechanic and Market Streets. The buildings, too, are very generally of wood, extremely old, and with little or no elevation above the surface, their decaying foundation timbers lying next to, and often partly under ground. It may be remarked that, according to all observers of the epidemics of yellow fever in Galveston, the disease has appeared first, and proved most rife and malignant in this quarter of the city.

"Galveston is not visited by yellow fever annually, nor, indeed, with any degree of regularity. Intervals, varying from one to four

or five years, have elapsed, during which its inhabitants are lulled into a fancied security, and its population is increased from abroad —when suddenly, without any obvious cause, this fearful scourge makes its appearance, exciting terror among the unacclimated, and overwhelming the city with gloomy forebodings—alas! only to be too fully realized. The season of its visitation is singularly constant in Galveston, the period fixed by observation for its outbreak being from the middle of August to the middle of September, rarely appearing before or after. The recent memorable epidemic was exceptional in this, as in many other respects, having appeared earlier than is usual. It is not the purpose of the writer of this article to attempt a full account of the epidemic in Galveston, but only to portray some of its more prominent features and incidents. The first undoubted case of yellow fever which occurred, it is generally conceded, was derived from Indianola, a town situated on the western coast of Texas, and with which Galveston is connected by almost daily steam communication. A young German, named Moller, a resident of Baltimore, who had been travelling in Western Texas, passed through Indianola, where yellow fever was then prevailing (it having broken out there just after the arrival of a vessel from Vera Cruz with some cases on board), arrived in Galveston on the 28th June, was attacked the following day, and died the 3d of July with black vomit. This was the first case that fell under my own observation. It is proper, however, to state in this connection, that a case was reported at our City Hospital as early as the 22d of June, which, if there was no mistake as to its character, would take precedence. The subject was direct from New Orleans, where the disease had existed in a mild form from early in June, there occurring only about nine or ten cases per week. I was shown a well-marked case in the wards of this institution on the 4th of July, and on the 5th, two cases at the Federal Military Hospital, none of whom, I was informed, had been absent from the city for several months previous. Two cases, I should mention, occurred during the week following; the first among the inmates of the boarding-house occupied by the case from Indianola. A few days after this, rumor was busy at work, and cases were reported in distant parts of the city, having no apparent connection with each other. I inquired among the physicians as to their dates and localities, and could trace no connection among the cases. They seem to have been sown broadcast over perhaps a mile square. I do not propose to discuss the question whether this

epidemic occurred from a local cause, in connection with a peculiar constitution of the surrounding atmosphere, or from a morbific cause, imported from abroad. While its origin would not seem to be connected with any particular meteorological conditions adequate to account for the disease, it is unquestionably true that the climatic conditions were highly favorable to its spread—given a starting point. The month of May was temperate, showery, pleasant, and remarkably exempt from all febrile diseases; nor was there anything to be observed in the type of diseases to foreshadow yellow fever. June, however, was a month of uninterrupted hot weather, the thermometer ranging daily from 85° to 90°, with a breezeless and stifling atmosphere. Towards the close of the month, from 20th of June to the 5th of July, a period of two weeks, there were heavy falls of rain daily, literally flooding the streets, and accompanied with unusual electrical phenomena. In the intervals, the sun shone brightly and with intense heat. It should be remarked, that our municipal authorities had shown, for several weeks previous to the epidemic, unusual activity in cleansing the city. Everything seemed to have been done which prudence and foresight could suggest to ward off the scourge.

"The foregoing statement includes, so far as I know, all the essential facts connected with the origin of the recent epidemic in Galveston. By the end of July the disease was widely diffused over the whole city, and was, in the true sense of the term, epidemic. Its ravages increased till the 8th of September, at which time the disease attained its height, as was shown by our mortuary lists, when it slowly, but steadily declined, till the last of October, when it ceased to be epidemic. There continued to occur sporadic cases throughout the months of November and December, the last case being admitted into the City Hospital on the 31st of December. The weekly mortality for fifteen weeks, commencing with July 27, and ending with November 9, according to the reports of the City Sexton, was as follows: 14, 65, 162, 159, 182, 172, 142, 73, 40, 28, 24, 13, 5, 8, 6. This statement will exhibit the rise, progress, and decline of the disease. The average mortality per day, from August 6th to September 18th, was 23, 34 being the highest and 7 the lowest. This embraces a period of six weeks of the most active prevalence of the fever. The total mortality, as reported to the middle of November, was 1134. The deaths that occurred afterward would probably swell the number to 1150. There are, perhaps, no means of arriving at a very accurate estimate of the

whole number of cases. It may be approximately stated at about 8000, from the best data attainable. From the great influx of population into our city since the termination of the war, Galveston having increased from a population of 8000 to 22,500, there was an unusual proportion of unacclimated or susceptible persons. It is worthy of mention, that among our large population resident in the open prairie beyond the limits of the city (from two to eight miles), although there was a number of cases, not less than fifteen or twenty, contracted by persons visiting the city, not a single instance occurred in which the disease was communicated from the sick to the well—proving, I think, conclusively, that it is not communicable in a well-ventilated atmosphere. Certainly, on the other hand, too, all observation shows that the poison of the disease is most communicable, and exists in most concentrated activity, in densely built and badly ventilated portions of large cities, where the population is huddled together in filth and poverty.

"The disease pursued a course so remarkable throughout a large part of our State, as to bring under discussion again the long neglected idea of contagion, which most members of the profession had regarded as obsolete. The constitution of the atmosphere certainly seemed to favor, in an unprecedented degree, the transmission of the poison from one point to another. However it may be explained, the fact is none the less true, that the disease extended not only to Houston, fifty miles distant in the interior, but to all the towns situated along the line of the Central Railroad and its branches, as Hempstead, Navasota, Millican, Brenham, Chappell Hill, and to others, as LaGrange, Huntsville, Anderson, twenty, thirty, or more miles distant from the railroads. At all these points the disease prevailed with great severity and fatality, committing ravages far beyond decimation. *En passant*, I may remark, that under the head of contagion, two distinct questions are often confounded, viz., the contagiousness and the transportability of a disease. A disease may not be contagious in the proper acceptation of the term—that is, communicable by personal contact from one human body to another, like smallpox or measles—and still it does not follow that the germ, or *materies morbi*, may not be transported from one place to another in a vessel, or baggage car, or boxes of goods, or clothing, and there be propagated. From the history of the epidemic, it would appear that the popular and oft-expressed belief that a frost was absolutely required to put an end to—to arrest and extinguish an epidemic of yellow fever—was

falsified by the events of this season. There was, up to the 18th of January—more than two months after the cessation of the epidemic—no frost, no freeze, and only a few days of cool north wind. Yellow fever obeys, I am persuaded, certain laws as fixed and immutable as those which govern the growth, development, and decay of organized matter. In the execution of such laws, the rise and fall of the thermometer can exert only a limited and temporary influence—can only retard and hasten the march of epidemics. Look at Havana, Vera Cruz, and other localities where yellow fever is indigenous, and where the temperature never falls to the freezing point, and yet in those cities the disease, after having run its course, obeys the laws which must everywhere control it, subsides and finally disappears in the latter part of summer or the first of autumn, to return with renewed virulence the succeeding spring, run its destined course, and again subside as before. Let there, then, be no deferring of hope till frost, but let us study and understand the laws which govern our epidemics, if we cannot banish them from our cities. If this error in the public mind could be eradicated, it would be relieved of much anxiety and apprehension with regard to the termination of our epidemics. The conviction, however, that a frost is requisite to destroy the poison of yellow fever is so firmly fixed in the popular, no less than the professional mind, that I fear no array of facts nor process of reasoning can divert it from this long-established belief. A coincidence is mistaken for a consequence, the subsidence of fever and appearance of frost having, as I believe, no connection as cause and effect. The late epidemic revealed certain striking peculiarities, different from any witnessed on almost any previous occasion. In the first place, it was more fatal, and ran its course more rapidly, when once fully developed, than in previous epidemics. The head symptoms were unusually severe, there being a strongly-marked congestive tendency to the brain in a large majority of cases. This was, *par excellence*, the distinguishing and characteristic feature of the epidemic. In the epidemic of 1859, the writer well remembers that the proportion of cases in which the brain was attacked was comparatively small. Then the stomach and bowels manifested a peculiar irritability, always difficult to control, and often terminating in black vomit, or profuse and exhausting diarrhœa. The hemorrhagic tendency may be said to have stamped and given character to that epidemic. Then the suppression of the urinary secretion was also, I think, a more common symptom in the latter

stages of the disease than in the past season, when, in the majority of instances, the kidneys continued to perform their functions up to the last moments of fatal cases. Whence this difference? The general character of no two epidemics seems to be precisely the same. Is it not reasonable to suppose that the peculiar poison of the disease expends its force rather upon one organ than another in different epidemics? At one season the brain, at another the stomach, and at a third the kidneys seem to bear the onus respectively of the diseased action. In all seasons and at all times the great nervous centres seem to experience some profound change, some sudden departure from the normal state—hence the sighing, the sense of oppression, and of weight about the great gangliæ—hence the intense neuralgic pains in the head, back, limbs, etc., in the earlier stages of the disease.

"But to return from this digression. No acclimation, short of an attack of yellow fever, seemed to serve as a protection in this epidemic. Not only persons who had lived here for fifteen or twenty years, and passed unscathed through several epidemics, but adult natives were in some instances severely and even fatally attacked. The number of second attacks was reported and believed to be much larger than in previous epidemics, probably ascribable to the fact that many of our young men had impaired or lost their acclimation by several years spent in Virginia or Tennessee during the late war. Another striking feature of the epidemic was, that native children, heretofore little liable, were generally and violently attacked. The number of deaths of children under twelve years of age, as appears from our mortuary lists, was one hundred and three, certainly a very heavy and unusual mortality. Of twelve resident practising physicians of the city, who were attacked, four fell victims to the disease. Of four medical officers of the army stationed here, three died.

"Not only is the character of no two epidemics the same, as before remarked, but the same epidemic may, at different periods of its progress, exhibit different prevailing tendencies or phases. This was illustrated in the epidemic which forms the subject of this sketch. During the earlier part of it, the tendency of the disease was very generally, almost universally, indeed, to the brain; later, however, it showed a tendency, in many instances, to localize itself in the stomach or intestines, more rarely in the kidneys. The precise date of this change, though it marked an era in the epidemic, cannot, perhaps, be fixed. According to the observations of other

physicians, as well as my own, it took place about the second week in September, or at least became a noticeable feature at that time. This change of phase was obvious and well marked, and formed the subject of comment at the time among our physicians.

"The cerebral tendency, however, continued in the ascendant throughout the disease. The fever in many cases differed little in its symptoms from that of other epidemics. After more or less malaise, lassitude, and sensation of fatigue, the disease made its appearance with a chill, amounting in a few cases to rigor. In many it was so slight as to be scarcely perceptible; in others, and a large number, it was totally absent. This condition, transient and of short duration, was followed by a state of febrile excitement, accompanied by pain in the head, back, thighs, and calves of the legs, the pain predominating in one of these localities. Generally the head was most complained of. There was intense frontal or orbital pain, the face was flushed and congested, the cerebral vessels full and throbbing, with vivid injection of the eyes. The capillary engorgement of the conjunctivæ was often remarkable, the eyes presenting a blood-shot appearance. Sometimes, so sudden was the attack, that the patient would exclaim, 'My brain is on fire,' and go off at once into the wildest delirium. Many cases of this class terminated fatally in from six to twelve hours after the attack. In a few cases the face would be flushed with a tendency to general capillary stagnation. Several moments would elapse after pressure before the color was restored, indicating a very sluggish circulation. The skin was generally hot and dry, and great difficulty was found in many cases in exciting and maintaining uniform perspiration. In some the heat of the skin was very pungent, the bulb of the thermometer in the axilla indicating several degrees above the normal standard, in two cases rising to 106° and 107°. The pulse was generally much increased in frequency. In congestive cases, and proportionably in cases of tendency to congestion, it was full and strong, and with a degree of tension that forcibly resisted compression. In cases free from such tendency, it was compressible, and without much resistance or impulse. Its average frequency did not probably exceed one hundred pulsations per minute, though it was sometimes observed at 130, 140, and even 150. Patients generally complained of a bad taste in the mouth, the tongue being more or less furred, with red tip and edges, generally, though not always moist, sometimes swollen, pale, and tremulous. There was loss of appetite, constant

and insatiable thirst, nausea, and often epigastric pain and tenderness, bowels generally constipated, urine small in quantity and highly colored, and always acid. In many cases the urine was tested and found to coagulate by heat and nitric acid, showing the presence of albumen. The disease was evidently a continued fever of a single paroxysm, in which remissions and exacerbations were seldom observed. A sympathetic, or secondary fever, in some cases occurred late in the disease from internal inflammatory complications. The primary fever, or febrile stage, usually lasted from forty-eight to seventy-two or eighty hours; to give the extremes, from six or eight hours to five or seven days. If protracted beyond the seventh day, as it sometimes was, it presented many of the characteristic symptoms of typhoid fever. Comparatively few cases died with black vomit, the large majority dying by the brain, with delirium or stupor, the latter deepening into coma and insensibility. Black vomit, when it occurred, was not confined to the third or last stage. This was not necessarily a fatal symptom, and recoveries after this condition were more numerous than usual. A much larger number occurred in children than in adults, in consequence of the greater recuperative powers of the system at that period of life. Many cases were accompanied at their decline with a measly or scarlet rash, which would cover the surface of the chest and arms, sometimes of the trunk also. In some instances it assumed a vesicular, in others a petechial character. Boils and abscesses were not common sequelæ of this fever. As in all other epidemics, here and elsewhere, the mortality was greatest among the foreign population—the Irish and Germans—they being more numerous here than any other class of foreigners. It is not my purpose to enter into details of the various plans of treatment pursued by our physicians. The profession, with few exceptions, was unanimous against the use of quinine, as fraught with injurious consequences. Indeed, of its value in yellow fever, unmodified by malarious influence, we have not, I think, any satisfactory proof. In epidemics that present a mixed character, it may be, and doubtless has been usefully employed. Certainly it was found inapplicable to the type of the disease which prevailed here during the past season. Its effect, after the use of evacuants, local bleeding and other appropriate treatment, was only, so far as my observation extended, to increase the cerebral irritation and to occasion great restlessness with exaltation of the febrile movement. Venesection was resorted to in a few instances, and with success where

a highly sthenic grade of action and imminent symptoms of congestion existed in robust, vigorous subjects. This remedy might probably have been had recourse to oftener with advantage, owing to the peculiar congestive character of the epidemic, as has been previously described. For the same reason, mercury was more generally employed, and with greater benefit than in previous epidemics. The treatment adopted by most physicians, after the type and characteristics of the disease had been sufficiently studied, was, in general terms, about as follows: In cases that exhibited a tendency to congestion (it was, as before stated, very generally to the brain), as shown by the tension and resistance of the pulse, as well as by the local symptoms, it was usual to direct to be given two or three grains of calomel, at intervals of two or three hours, either alone or associated with bi-carb. soda and extract hyoscyamus, until the bowels began to move. The calomel was given for its alterative and not its irritant effect. In these cases, when the tone of the arterial system was high, it was given to reduce the action of the heart and arteries, and also for its effect upon the whole secretory system, which seemed to be deeply and generally deranged. It was seldom, or never, given with the object of touching the gums, though they were sometimes unintentionally affected. After three, four, or more doses, according to the effect, motions were obtained from the bowels, usually at first dark and offensive, sometimes almost tarry in appearance, and then of a bilious character. After one or two of the last, if the bowels were disposed to overact, some paregoric and soda, or some astringent was given to restrain them. At the same time the local congestion was sought to be broken up, and equalization of the circulation effected by powerful revulsives—as, for example, if there were pain, heat, and throbbing of the head, by hot mustard foot-bath, strong mustard application at the back of the neck, from the mastoid processes half way down the spine, and also a sinapism over the epigastrium. Cold and iced lotions were also freely and constantly applied to the forehead and temples. To secure the sedative influence of cold, it is indispensable that it be continuously applied. Did these measures fail to relieve the congestion and to moderate the fever, local depletion by cups or leeches was resorted to, and usually with excellent results. If the urinary secretion was deficient and scanty, a large sinapism over the lumbar region, down to the sacrum, was often found to relieve the congestion, on which it seemed to depend, and to better promote the action of

the kidneys than the employment, however judicious, of diuretics. If nausea, with much epigastric tenderness, existed, leeches were applied over the stomach for its relief. The assiduous application of strong mustard poultices over the stomach was preferable to blistering. A blister often presented a raw, irritable surface, indisposed to heal. If gastric irritability continued, it was best relieved by warm mustard poultices over the epigastrium, together with the internal administration of alkalies (bi-carb. soda preferably), they alleviating the burning sensation at the stomach. Creasote and hydrocyanic acid were found of little or no advantage. Lime-water and sweet milk succeeded often in quieting gastric irritability when more powerful remedies had failed. If, after a partial subsidence of the fever, the nervous symptoms were prominent and the patient restless and unable to sleep, some form of opiate was advantageously given to promote quiet and sleep. Often a few hours of tranquil sleep, at this stage, would be followed by resolution of the fever. Morphia and bi-carb. soda in some aromatic water were often given with excellent effect to secure this object. Assafetida was sometimes employed, with the happiest results, in subduing the nervous symptoms, nor were its disagreeable taste and odor found to disturb the stomach. It was usually, and I think best, given in combination with some preparation of opium. Most cases required stimulants after the febrile stage. Brandy and porter were generally esteemed the best. Relapses were frequent, and generally arose from imprudences and errors of diet, or from improper exertion at too early a period of convalescence. To enforce a rigid diet is often a difficult and disagreeable task for the physician, but many melancholy instances attested the danger of neglect in this regard. The powers of assimilation are so greatly impaired after an attack of yellow fever, however mild, that the highest degree of caution and circumspection is necessary in the regulation of the diet. Farinaceous articles, and fluids, as light broths, carefully prepared, are best adapted to the enfeebled state of the digestive organs. Perhaps no article of diet is more suitable for a convalescent from yellow fever than fresh milk, easily assimilable as it is, and combining all the elements of nutrition. In many cases of the fever of a mild and uncomplicated character, the entire treatment consisted in a mild purgative, a foot-bath, and diaphoretic drinks, cold or warm, according to the preference of the patient, and followed by appropriate stimulants and tonics. Many physicians were led to the conclusion that medicines availed

little in cutting short or even controlling the disease; that it was a fever which would run a certain definite course, in spite of remedies, and that the chief duty of the physician was to husband the resources of the constitution—averting, by proper measures, undue determination to any particular organ; or, according to Dr. La Roche's advice, to treat the urgent symptoms as they arise, leaving the rest to the reparative powers of the system. In cases where drastic purgatives were employed, it was generally observed that either the attacks proved fatal from profuse and uncontrollable diarrhœa, or, if otherwise, that there resulted greater debility and more protracted convalescence. I will now conclude with the expression of the hope that this imperfect sketch may be the means of calling the attention of the physicians of Texas to the importance of giving to the profession a history of the recent memorable epidemic throughout our State, and that this, however small and unpretending a contribution to that object, may not be wholly without value. The epidemic of 1867, in Texas, swept to the realms of death not less, perhaps, than four thousand persons. Such calamities, like the shock of contending armies, and the overwhelming of cities by volcanoes and earthquakes, furnish the historian with events which fill the imagination and move the passions of mankind; but the scientific physician finds a deeper interest even in contemplating the causes and conditions which are concerned in producing 'the pestilence which walketh in darkness,' and suddenly, with its poisonous breath, smites down whole communities,

> 'Like plants, where the Simoon hath pass'd,
> At once, fall black and withering.'

"In view of this, the mere history of yellow fever, independently of its pathology and therapeutics, is a desideratum. There have been many theories and explanations of the cause of yellow fever. If the solution of this problem shall ever be achieved, a careful study of the history, geography, and conditions of the disease affords the most promising route to that end; and should it fail to attain this result, its facts, divested of theory, must serve as the best landmarks and guides for the prevention, avoidance, and mitigation of evils, the cause of which may forever elude human research."

From Indianola and Galveston, as initial or starting-points, the one for the western and the other for the eastern part of the State, the disease, as will be apparent in the course of this report, pre-

vailed over a wide extent of country, following the principal channels and routes of intercourse. I condense a brief statement of the epidemic at Port Lavacca from an account furnished me by Dr. T. Somerville Burke, of that place. Port Lavacca, a town of twelve hundred inhabitants, is situated on Lavacca Bay, twelve miles distant from Indianola, and with which there is frequent and constant intercourse. With the exception of occasional epidemics of yellow fever, Lavacca is remarkable for its salubrity. During the spring and summer of 1867, there was an unusual amount of rain. During the months of June and July the weather was very hot and oppressive, with a prevalence of light winds from the north, whereas the prevailing winds at that period of the year are from the south and southeast. The first case of yellow fever occurred on the 3d of July, and the disease progressively increased from that time till the 1st of August, when it was declared epidemic by the Board of Health. During the period from the 15th of August to the 1st of September the disease attained its height, and by the last of September it ceased to be epidemic. A few cases occurred during the month of October. Two distinct grades or phases of the disease were met with at different periods of its prevalence. In the beginning, symptoms tending to congestion of the brain predominated largely; towards the middle and decline of the epidemic, the symptoms showed a strong tendency to active congestion of the abdominal viscera. There were but few cases in which the kidneys were involved. One of the sequelæ of the fever was a measly or scarlet rash. Also large and numerous boils in some instances covered the entire body. The estimated number of cases was about five hundred, of which the mortality was twenty-nine. The character of the disease was generally mild.

From the accounts furnished me of the epidemic at Victoria by Drs. S. Goodwin and J. B. P. January, I extract a synopsis. The year 1867 was remarkable for the great amount of rain which fell during the spring and summer at this point, and for the high range of temperature. Rains were of almost daily occurrence until near the subsidence of the epidemic. An unusual amount of malarial fever, chiefly of bilious remittent type, prevailed from the middle of June until the 1st of August. About the latter date several persons came to Victoria from Indianola, where yellow fever then prevailed, and were on their arrival attacked with the disease. These persons were clearly infected at Indianola. The disease spread and

continued to increase till the 22d of August when it was declared epidemic. From this time it pervaded the town, involving the whole unacclimated population of every age and condition. From first to last the number of cases was probably not less than two thousand, of which the mortality was quite two hundred. The disease was of the congestive form, and the tendency in most of the fatal cases was to the brain. A number of cases were obviously modified to a greater or less extent by the coexistent malarial influence, of which mention has been before made. One case was reported by Dr. Sutherland, strictly intermittent in character, in which the patient died seven hours after the third chill with profuse black vomit. These modified cases were more generally fatal than those of simple unmixed type, and were generally benefited by quinine in large or sedative doses. The disease attained its maximum of intensity about the 1st of October, from which time it gradually declined, a few cases occurring as late as Christmas. The only other point in Western Texas where this form of fever prevailed epidemically was Goliad. Of its history there I have only been able to learn that the first case occurred on the 12th of July, and that it was traceable beyond question to infection at Indianola. The same general climatic and hygienic conditions seem to have obtained there as have been described at Indianola and Lavacca. The estimated number of cases was one hundred and twenty-five, with twenty-three deaths resulting. As has been mentioned in the sketch of the epidemic at Galveston, the disease extended from that place to Houston, situated fifty miles north on Buffalo Bayou, which flows into Galveston Bay, and was thence diffused along the lines of railroad which penetrate the interior, and even to points at a considerable distance from them. I regret my inability to obtain any history of its origin and prevalence at Houston, though I have made repeated applications for information to several leading members of the medical profession of that place. I can therefore only say in general terms, from all the information accessible to me, that yellow fever seems to have prevailed there with equal severity and fatality as in Galveston, in ratio with the difference of population. There seems to have been exhibited a strong family likeness as well between the atmospheric conditions as the type and other peculiarities of the disease at those two points. The mortality did not probably fall short of six to seven hundred.

Of the epidemic at Hempstead, distant fifty miles from Houston, on the Central Railroad, I can only learn that one hundred and

fifty-one deaths were reported to the Howard Association of Galveston, as having occurred at Hempstead from August 9th to November 26th, the entire period of the disease being embraced between those dates. Of the epidemic at Navasota, a town on the Central Railroad, eighty miles distant from Houston, and one hundred and thirty from Galveston, I present the subjoined brief account, extracts from a report made in response to my inquiries by Dr. A. R. Kilpatrick, a resident physician at that point.

The town of Navasota is situated N. latitude 30° 20′, longitude W. of Washington 19° 20′, about two miles south of the Navasota and five miles east of the Brazos Rivers, in the midst of a moderately undulating country, of which the drainage is very imperfect. Many of the buildings, both dwellings and warehouses, are placed close to the ground, and allow the water from rains to collect under them, and often to stand for weeks. The soil is of alluvial formation and very tenacious of moisture. There was an unusual amount of rain during the spring and summer of 1867. In August, particularly, the rains were continuous and heavy. The range of temperature was extraordinarily high. In June, July August, and September, the thermometer was seldom below 80°, and often ranging from 90° to 98° or even 100°. During the latter part of July and early in August, there prevailed in the town an unusually severe grade of malarious fever, which exhibited some analogy to yellow fever. It was observed in two fatal cases that the cadaver turned very yellow. The first undoubted case of yellow fever occurred on the 12th of August, in the person of a citizen on returning from a visit to Galveston. This case proved fatal on the 15th. Of those who visited his remains after death, several persons were attacked a few days afterwards. Two of these cases terminated fatally with black vomit on the 24th. A panic now ensued, and of a population of 3000 more than half precipitately fled the town. Some of these were already infected with the disease and died in the country or neighboring towns. Of the population that remained, not more than twelve or fifteen escaped an attack of the fever, and of this number, there were only three or four who had not had a previous attack. The total mortality from the epidemic was 154. Of the white population there occurred among males 87 deaths, among females 43. Of the colored population, the mortality was 24, and of this number there were only three of unmixed negro blood. The latter scarcely kept their beds in consequence of an attack of the disease. The epidemic was cha-

racterized by local determinations primarily to the abdominal viscera, and involving secondarily the brain and nervous system. Cases that were simple in form were easily treated, and recovered without difficulty. One second attack of the disease proved fatal. One recovery took place after black vomit. The lack of experienced and efficient nurses, and even of medicines and other needful appliances for the sick, was very sensibly felt early in the epidemic, and certainly contributed greatly to the mortality. The disease may be said to have become epidemic about the last of August, and to have attained its greatest prevalence about the middle of September, after which date it gradually declined. It ceased early in December, well-marked cases occurring after frost. Cases of simple fever, after frost, would gradually merge into yellow fever. Contrary to the general rule that epidemic diseases on their decline become milder and easier of control, the greatest mortality in proportion to number of cases occurred in November, which was no doubt ascribable to the cool variable weather, open and uncomfortable character of many of the dwellings, the want of fireplaces, etc.

The epidemic occurred at Millican, ten miles distant from Navasota by railroad, simultaneously with that at the latter place. I have received no particular account of it. The mortality was about 150. I am indebted to Dr. William A. East, of Anderson, Grimes County, for a report of yellow fever at that place, from which I make the following synopsis. The first case occurred on the 15th of October, in the person of an ostler attached to one of the hotels, who contracted the disease by visiting Navasota at night, where it existed at that time in an epidemic form. The proprietor of the hotel and his wife were next attacked and died with black vomit. Their deaths excited a general panic, and nearly the whole population fled to the country. But few subjects were in consequence left for the disease, which would otherwise no doubt have prevailed widely and fatally. There occurred in all 15 cases, of which 4 died. The last case occurred on the 12th of November. Of the epidemic at Huntsville, I have been unable to obtain any account from its resident physicians. I learn from the records of the Howard Association of Galveston that from August 9th to October 19th, 130 deaths were reported to them as occurring from the yellow fever at Huntsville. Huntsville is situated more than thirty miles from the Central Railroad at its nearest point. Yellow fever prevailed epidemically and with great severity at Chapel Hill and Brenham, towns situated on the Washington County

Branch of the Central Railroad. Dr. B. C. Meredith, of Chapel Hill, has furnished me an account of the epidemic there, from which I condense a brief statement. The early part of the spring and summer of 1867 was unusually rainy, producing a rank and rapid growth of vegetation, such as Dr. Meredith had never before observed during a residence of twelve years. The rains continued frequent and heavy until the last of July. The exhalations from the surface after rains added to the intensity of the heat, which was very great, the thermometer ranging from 85° to 103° Fahrenheit. These and other influences gave rise to malarial fevers at as early a period as May, which assumed principally the remittent form. As the season advanced they increased in virulence, and in many instances partook of the pernicious or congestive type. It was remarkable that almost every case of the bilious remittent form of fever was characterized by intense headache during its progress and by redness and injection of the conjunctivæ from the onset of the attack. The first case of yellow fever occurred two or three miles from the town. The subject, a young lady, contracted it from a trunk of dress goods received by her from Houston, the contents of which she occupied some time in opening and examining. This was on the 6th of August.

In further illustration of the communication of the disease by fomites may be mentioned the case of a young man in the town who contracted a well-marked attack from opening a box of damp books received from Houston or Galveston the previous day. He spent several hours in their examination, and observed at the time the presence of a peculiar and unpleasant odor. Cases continued to increase till about the middle of September, when the disease may be said to have attained epidemic prevalence. A short time before a general flight of the panic-stricken inhabitants took place, and perhaps one-third of the population left the town. Of those remaining fully one-half fell victims to the destroyer. The total mortality was 123, of which 93 were white persons, young men preponderating in number, and 30 colored persons. The disease attained its zenith the last of September, and prevailed with great severity till late in October, when it declined gradually till its cessation early in December. The disease generally evinced in its commencement a tendency to congestion of the brain and lungs. Cold water poured on the head from one-half hour to two hours seemed often to subdue the tendency to the brain, and almost invariably to produce composure, however great the cerebral excite-

ment. Appropriate nourishment and stimulants were found necessary so soon as the fever subsided, a condition of great debility generally resulting. There was exhibited a very strong tendency to relapse on the slightest imprudence or over-exertion even after convalescence seemed fully established. There were two or three recoveries from black vomit. Among the victims of the epidemic were Drs. J. P. Perkins, E. W. Rogers, E. P. Hammons, and McCartney, a mortality of one-half of the resident physicians.

Although the fever prevailed as a severe epidemic at Brenham, I have been unable to obtain any report from that place. From the records of the Howard Association at Galveston I learn that from August 11th to October 31st there were reported 246 cases, of which number the mortality was 120.

Dr. J. F. Hicks, of Columbus, has collected and reported to me some facts of interest of the epidemic at Alleyton, all the physicians of that place having died of yellow fever. The summer of 1867 was excessively wet, heavy rains falling from two to four times per week during the months of July, August, and September. The first cases of yellow fever were reported by the resident physicians on the 4th September. These persons clearly contracted the fever in Galveston, being employés on the railroad and daily obliged to pass to and fro from Alleyton to Galveston. In a few days the disease became epidemic, and nearly every inhabitant of the village suffered from it, except a few who fled to the country. The disease ran its course by the 20th October. Dr. Hicks reports that not a single case of yellow fever occurred at Columbus, a considerable town on the Colorado River, distant only three miles from Alleyton, no intercourse being permitted with the latter place during the prevalence of the fever there. Late in November the refugee citizens returned to Alleyton, and some cases of fever occurred under circumstances like the following: A family of three members moved into a house in which some bedding from the Yellow Fever Hospital was stored. In a few days they were attacked with yellow fever, and all died. Another family returning on the 10th December occupied the house in which Dr. Phillips had died, and in the cellar of which his clothing had been thrown after his death. All were attacked with yellow fever, and died on the 17th and 18th of the same month. Other families who returned at the same time to houses which had not been occupied by the sick during the epidemic escaped the disease. The total number of cases at Alleyton was about ninety; number of

deaths, forty-five. Perhaps no town in the interior was visited with more severity by yellow fever than La Grange, distant from any line of railroad more than thirty miles. The following brief abstract of the report of Dr. W. C. McGown, of La Grange, is herewith presented: La Grange is situated in the beautiful valley of the Colorado, and contains about 1500 inhabitants. Its site is sandy, with no stagnant water or marsh in or around the town. The season was excessively wet, there being almost constant and heavy rains during the month of August and until the middle of September. The wind was chiefly N. and N. E., the ordinary prevailing winds at that season being from the south. Miasmatic fevers prevailed to an unusual extent, of a mild character early in the summer, but later increasing in severity, and requiring larger doses of quinine and great caution in the employment of purgatives from heightened and extreme susceptibility to their effects. Yellow fever made its appearance about the last of August, spread rapidly, and soon became epidemic. The disease exhibited itself in every form from the mildest to the most malignant. Its greatest prevalence and severity continued during the month of September, after which it became much milder and easier of control. The disease lasted until November, embracing a period of about sixty days from its outbreak. About the 1st of November many of the inhabitants who had fled to avoid the fever, returned, and very few cases occurred among them, in some large families a single case, in others none, and this, too, although the weather continued warm and there was no frost for several weeks afterwards. The whole number of cases may be estimated at 800, of which 200 died. Perhaps not more than half of the cases had medical aid, as many of the resident physicians were attacked by the disease. Its origin is plainly ascribable to the fact that many persons came from Galveston and Houston to La Grange for security, some of whom had been in attendance on cases of yellow fever; others brought their bedding, etc. These persons were the first subjects of the disease.

Yellow fever extended to a few other points than those mentioned, as Bastrop and Independence, at each of which a few deaths occurred, and also Harrisburg, situated on the Galveston and Houston Railroad, and Liberty, situated on the Trinity River. At both Harrisburg and Liberty the disease prevailed with considerable severity, but I have no report or data from either place.

From the reports given at length and the abstracts of others, I

trust I have succeeded in delineating the most prominent features, and grouping together the most important facts of the yellow fever epidemic of 1867, in Texas; the most wide-spread and fatal known in the annals of her medical history. The uniformity and consistency which characterize the statements of the medical gentlemen who have contributed the fruits of their observations to the production of this report, afford the strongest guarantees of their competency and honesty as observers.

Before concluding this report, already extended to a length greater than was at first contemplated, I propose to review briefly some of the more important facts of the epidemic; and the deductions and inferences logically founded on them.

The remarkable uniformity in all the reports from all parts of the epidemic district, as respects the range of temperature, winds, and rains must have arrested the attention of the reader. The winds were, with few exceptions, from the north, northeast, and northwest. The winds from these quarters during the summer months are not what are known as northers proper, which are as a rule associated with a low range of temperature, and blow with great force continuously for two or three days, and are very dry, having been wrung of their moisture in their course over the high range of mountains between Texas and the Pacific; but are mere puffs alternating with dead calms, the temperature being at the same time extraordinarily high, and the atmosphere saturated with moisture. The same general influences clearly obtained throughout, at least, all the region of the State represented by the map herewith appended, and may be denominated the epidemic district, and such localities as escaped evidently owe their exemption to non-intercourse with infected places, and to guarding against the introduction of the disease either by persons or fomites. So far as I have been able to learn, the origin of yellow fever was, during the past season, in every instance clearly traceable to infection. In proof and illustration of these statements, the town of Columbus, only three miles distant from Alleyton, Washington, only five miles distant from Novasota, and Richmond, situated on the railroad from Galveston and Houston to Alleyton, escaped the disease by the enforcement of a rigid system of quarantine against all infected points, while I need scarcely recall to the reader the numerous instances to be found in the reports before given, where the evidence of the infectiousness of the disease was clear and indisputable. There seems but one opinion so far as I have been able to extend my inquiries,

as respects the putrid state of the atmosphere (if I may be allowed the use of the term) of all the localities in Texas, where yellow fever prevailed during the past year. The odor, which was broadcast in the atmosphere of the cities and towns where the epidemic raged, was offensive in the extreme. It would be difficult to institute a just comparison as respects its character. In former epidemics, I have always experienced it, and can, perhaps, employ no better terms as expressive of it than to style it a musty, sweetish, and, withal, a peculiar, pungent, deadly odor. According to my own observation and that of others, this peculiar odor, which to be appreciated must be experienced, only prevails in the midst of yellow fever. It is not confined to houses, but often pervades the atmosphere of certain districts of the infected locality. I have uniformly observed that where this odor is seemingly most concentrated, there a larger proportion of the susceptible are attacked and the disease is most malignant. Is this one of the sensible properties of the yellow fever poison? or does the poison determine certain chemical laws in an atmosphere reeking with almost every imaginable impurity consequent on active decomposition and exhalation of animal and vegetable matter, that result in the production of this odor? Is this the subtle and mysterious influence which, while it casts a death-like torpor over the vaso-nervous system, determines the most intense hyperesthesia of the nerves of common sensation? Time and future observation must resolve the problem. I infer a relatively small amount of ozone to exist in such an atmosphere. Should yellow fever prevail this year, I hope to be able to either prove or disprove my conjectures.

REPORT

ON THE

DISEASES OF PENNSYLVANIA.

BY

D. FRANCIS CONDIE, M. D.

REPORT ON THE DISEASES OF PENNSYLVANIA.

For the successful accomplishment of the task assigned the reporter by the Association, much time and a heavy amount of labor would be required.

When we consider the wide extent of Pennsylvania, and the diversity of its surface, now rising into hills of greater or less altitude, or into extensive mountain ranges, and then again sinking into valleys varying in width and profundity: the streams of water, formed from the drainage of the neighboring highlands, which flow through the valleys, of more or less width and depth, and differing in the velocity of their course in each valley, according to the greater or less inclination of the latter: all sensibly diminishing in volume during the droughts of summer, while during the rains of autumn, and the melting of the ice and snow in spring, they are liable to become swollen to an extent which causes them to overflow their banks, and even inundate to some extent the adjacent country. When these circumstances, taken in connection with the difference in the meteorological phenomena of different sections of the State, and the diversity in the density of population in different localities, and in the character, habits, and pursuits of the people of whom the population is composed are considered, it must be evident that to arrive at anything approaching a correct estimate of the etiology of the diseases of Pennsylvania, the medical topography, the meteorology, the hydrography, and the number, the character, and the industrial pursuits of the inhabitants of each locality must be carefully studied, in conjunction with the nature of the maladies which usually prevail at the different seasons, and the changes, if any, which they may undergo from year to year. Unfortunately, this work has not been completed for even the more important and densely populated sections of the State, while in the larger portion of the State it has not even been commenced. It was hoped that the work would have

been begun and carried on to completion by the State Medical Society through the agency of its several county branches. Unfortunately, however, the organization of the profession has been effected in but few of the counties, while the reports annually received by the State from the County Societies in existence are, in many instances, incomplete and superficial.

It may be stated, in general terms, that the ordinary diseases which prevail sporadically in all the northern and middle States of the Union at the different seasons of the year, occur throughout every portion of Pennsylvania. They vary somewhat in character in different localities and in different seasons. Thus, during the colder months, and especially in dry, elevated localities, the various acute inflammations of the air-passages, lungs, and pleura; acute rheumatic disease of the muscles and larger joints prevail more or less extensively, especially when the season is marked by sudden transitions of temperature.

Croup is spoken of by the physicians of different sections of the State as of frequent occurrence during cold, damp, and variable weather. The disease to which reference is here made, is, we have reason to believe, in very few instances of the true croupal character. The majority of the cases belong evidently to that form of croup which has been denominated catarrhal or spasmodic, and in which there is no deposit of a pseudo-membranous character. Diphtheria, or membranous angina, has, of late years, prevailed annually in different parts of the State; sometimes within very circumscribed limits, but at others, epidemically, over a somewhat wide extent of country. It has lost much of the malignancy which characterized it on its first appearance among us, which is in a great measure, probably, to be attributed to a better acquaintance with its pathology, leading, necessarily, to a more rational and efficient plan of treatment.

Hooping-cough is met with in different portions of the State almost every year, extending sometimes over a wide neighborhood, or over several smaller ones lying in close proximity; more generally, however, the disease is confined within very narrow limits. So far as the information the Committee have been able to obtain permits them to form a judgment, they would infer that, unless when it is complicated with bronchial or pneumonic inflammation, or with chronic disease of the intestines, or when it occurs in subjects strongly predisposed to tubercular depositions, the mortality of hooping-cough in Pennsylvania is comparatively slight. It is

not uncommon, however, for the spasmodic, hooping stage of the disease to be protracted for a long period, by the repeated recurrence of paroxysms of longer or shorter duration, after intervals of a few days or weeks, or even months, especially on the patient being attacked with a slight catarrh.

The wide-spread epidemics of that particular form or type of catarrhal fever known as influenza, which, as late as the beginning of the present century, swept the State from one end to the other with the rapidity of the wind, have, of late years, almost entirely disappeared. The disease, as it now occurs, is confined to very narrow limits. It has seldom been attended, of late years, with any very great amount of mortality. It is generally considered by our physicians as a disagreeable and depressing, rather than a dangerous malady, excepting, however, when it occurs in the aged or in persons of a feeble or broken-down constitution.

Consumption of the lungs would appear to be rapidly on the increase in many parts of the State. Although it is more than probable that a large number of the deaths reported as from phthisis pulmonalis are simply cases of chronic bronchitis, yet it is nevertheless true that, not only in the large cities of the State, but in the villages and hamlets of the interior, pulmonary tuberculosis prevails to a much greater extent of late years than formerly. To what this may be attributable it is not so easy to determine; whether it be due to some unappreciable change in the climate, to the increase of the population through immigrants comprising a large number predisposed to pulmonary tuberculosis, or to a desertion, on the part of the people of the present generation, or a large portion of them, of the simple, active lives led by those of the preceding generation.

During the season of greatest heat, especially in the valleys and along the banks of watercourses, diseases of the bowels usually prevail every year, while, throughout the autumn season, in the same localities, the prevalent diseases are dysenteries, often of a very severe and fatal type, and fevers of a continued, remittent, or intermittent type, which, during the prevalence of damp, changeable weather, and in malarial regions, are very liable to assume a low, typhoid form.

In the hot, dry weather in the latter part of summer and the early portion of autumn, simple cholera morbus is of common occurrence, while every year since 1832, cases of Asiatic or spasmodic cholera, more or less numerous, have occurred in different portions of the

State, especially amid the more densely populated communities situated along the great routes of travel. These annual epidemics have usually been circumscribed within quite narrow limits. In several instances the disease was very clearly traceable to the use for drinking and domestic purposes generally of impure water.

Formerly the almost invariable endemic of the State, during the autumnal months, consisted in the different forms of periodic fever, from the severest bilious remittent, which usually prevailed extensively after a hot dry summer, to the simplest form of fever and ague, which infested the neighborhood of nearly all the water-courses of the State, and the vicinity of the low wet grounds of certain valleys. During the spring months, also, the occurrence of cases of remitting fever, to a greater or less extent, was not unusual in the several miasmatic localities of the State. In later years, however, periodical fever is by no means an endemic of such regular occurrence as formerly. In many localities it has either diminished in amount or entirely ceased. It would appear to be in a great measure, if not entirely, replaced everywhere by an endemic of typhoid fever. In many miasmstic districts a form of fever is met with which, commencing with the symptoms of ordinary remittent fever, sooner or later assumes a more continued form, presenting, finally, all the diagnostic phenomena of typhoid or enteric fever. In this *typho-malarial* form of fever, although the course of the disease is often very protracted, yet the recovery has, heretofore, been nearly always satisfactory, and there have occurred very few instances of relapse.

It is evidently the same disease that is described as a mixed form of fever in the report to the State Medical Society from Perry County for the year 1864. It prevailed along the western branch of the Juniata River, attacking patients of both sexes, and of ages ranging from fourteen to sixty years. The attack was ushered in with a chill followed by fever, resembling the ordinary remittent fever which prevailed eight or ten years previously along the shores of the Juniata during the autumnal months. There was pain of the head, with slight delirium; a locked up state of the secretions, of the liver especially; aching pains of the loins and extremities, irritation of the stomach and bowels, with moderate discharges of blood from the latter, accompanied during the whole period of sickness with a disposition to tenesmus and diarrhœa. When there occurred copious discharges of bile recovery would immediately commence, and, finally, after the lapse of a fortnight or

more, there would take place an entire restoration of health. When the disease began to yield it would assume an intermittent form, which yielded readily to the sulphate of quinia. It was common for the typhoid symptoms to linger about the system for some days after the fever had disappeared. The result of the disease was invariably favorable, under a mild alterative treatment, tonics adapted to the circumstances of each case, with sulphate of quinia to check the recurrence of the fever after remission.

Almost every year scarlatina is met with in different portions of Pennsylvania. Although in general the cases in each locality are few in number and mild in character, yet in some years, and in particular neighborhoods, the disease has prevailed as a very formidable and destructive epidemic. Scarlatina, though by no means unknown during the summer months, has generally prevailed, and, we should infer from the facts that have come into our possession, in its most severe and destructive form, during the autumnal and winter months.

Measles is apparently of even more common occurrence throughout the State than scarlatina. Though seldom attended during its course with any very formidable or unmanageable symptoms, nevertheless, in patients of a debilitated constitution, or who are predisposed to disease of the lungs or of the bowels, measles, especially when neglected or mismanaged, is liable to be succeeded by certain chronic affections from which the patient recovers with difficulty, if at all.

By the reports made to the State Medical Society it appears that measles prevailed throughout nearly the whole of Pennsylvania during the greater part of the year 1863 and the spring of 1864. In Beaver County the disease made its appearance during the latter part of 1863. It was at first mild in character, but during the early months of 1864 it became frequently complicated with pulmonary affections of a more or less severe grade. Several of these complicated cases, occurring in children and aged persons, proved fatal. In Bradford County similar complications were observed, with the same result. In some cases, about the period when the eruption became fully developed, obstinate vomiting and profuse diarrhœa set in.

In Indiana County during the years 1863 and 1864 there was a severe epidemic of measles which affected persons of all ages from infancy to sixty years. Some cases were attended with delirium and other nervous disturbances. In most instances there was a

strong tendency to inflammation of the lungs, and in others of the stomach and brain; severe pain of the head and back, with continued vomiting, was present in some cases. In the more severe cases the eruption did not appear until the fifth or sixth day. It was mostly irregular, and of a livid hue. Many of these cases proved fatal. In Montgomery County, during the year 1863, measles prevailed very extensively, scarcely a single individual escaping, excepting infants under a month old, and such as had previously undergone the disease. Cases were observed in individuals over seventy-five years of age. In many cases profuse diarrhœa proved a troublesome symptom. In some sections the disease was of a low type, and complicated, at first, with a severe bronchial affection. In other cases the complication amounted to pneumonia. Notwithstanding its extensive prevalence throughout the county, the mortality from the disease was comparatively slight.

In the report from Northampton County of the same year, it is stated that in the summer of 1863 measles of a mild form appeared. Very many of the cases presented no bronchial symptoms. A few months subsequently some of those who had passed through this mild form of measles were reattacked, and passed again regularly through the disease. In many instances, and in different parts of the State, we learn, from the reports of various physicians, that those who were attacked during the years 1862–63 were such as had passed through the disease at some former period.

Erysipelas, as well traumatic as that still more serious form denominated idiopathic or constitutional, would seem to be a very common malady in Pennsylvania. Few years pass in which cases of it are not met with in some portions of the State; in some seasons and localities prevailing extensively as a wide-spread epidemic of either a mild type or in a form of considerable severity. When it attacked the face, mouth, tongue, and fauces it was attended with a heavy amount of mortality.

The idiopathic form of erysipelas, especially when it occurs epidemically, has much the character of a true eruptive fever; the affection of the skin being evidently as much dependent upon some morbid condition of the blood or of the general system, as is the affection of the skin in scarlet fever, measles, or variola. In many instances the eruption or disease of the surface is of an ambulant character—that is, spreading gradually to the surrounding surface, usually in a single direction, as it disappears from the part already affected; travelling in this manner from point to point over the

entire surface and scalp, as well as over the whole of the upper half of the body. The color of the affected parts is usually of a dusky red; large vesications early form, filled with a very thin serous fluid, sometimes of a yellowish color, occasionally tinged with dark-colored blood. The local swelling and sense of heat or burning are generally very considerable. The attendant fever is most usually of a more or less adynamic character. In several cases the fauces are dark red and dry, and the tongue dark colored, almost black, dry, and shrivelled, rendering deglutition and speech difficult. In most cases violent delirium sets in early, and is followed often by low muttering delirium or coma. The disease is in general protracted in its course. Of eleven cases seen by your Committee during the prevalence of the disease in 1864–65, six were in females and five in males. The patients were mostly of feeble or broken-down constitutions. The oldest was sixty-five and the youngest twenty-two years of age. There was nothing particularly objectionable, in a sanitary point of view, in respect to the location or condition of their dwellings. Of the eleven patients referred to nine recovered, and two, males, died. The remedies chiefly relied upon were the tincture of the muriate of iron and quinia, with, in nearly every instance, diffusible stimulants and opiates. The only external application made use of was lard smeared in sufficient quantity upon the diseased surface to preserve it from contact with the air. Blisters, however and wherever applied, seemed to be productive of far more harm than good; painting with tincture of iodine, in every instance in which it was tried, failed to prevent the extension or spread of the erysipelatous inflammation.

It has been noticed that in all the more severe and extensive epidemics of constitutional erysipelas, peritoneal inflammation of a very acute grade was liable to prevail among all within the epidemic influence, but especially was this liability observed in parturient females. In a report made by Dr. Galbraith, of Perry County, to the Pennsylvania State Medical Society, at its session of 1862, he remarks that, whenever erysipelas prevails, experience has taught him to be ever on the watch for peritoneal inflammation in his puerperal cases. Dr. Galbraith states, in the report referred to, that he has witnessed several epidemics of puerperal fever. The severest was in the winter of 1849, continuing into the spring of 1850. Preceding and accompanying the epidemic many cases of erysipelas of a severe grade were met with. In the beginning of June both erysipelas and puerperal fever ceased. It

was not until the close of 1861, and the first four or five months of 1862, that erysipelas once more made its appearance, and then cases of puerperal fever were again met with.

In different portions of the State cases of simple peritonitis are met with in puerperal females, almost every year. These cases are, however, generally few in number, and comparatively mild in character, yielding readily to an active depletory course of treatment when resorted to at the onset of the attack. So far, however, as we have been able to learn from the reports of physicians practising in different parts of the State, the malignant form of puerperal fever has almost invariably occurred as an epidemic of greater or less extent, and in every instance preceded or accompanied by epidemic erysipelas.

For several years past in the different portions of the State, there have been met with cases of the so-called spotted fever. In some localities, the cases have been comparatively few in number and confined to a small neighborhood. In other localities they have been numerous and spread over a wide extent of country. The disease has been confined to no age nor sex, though, upon the whole, the greatest number attacked have been unquestionably the young and perhaps males. In respect to the locations and hygienic conditions of the majority of those attacked, your Committee have not the data to enable them to arrive at anything like a positive conclusion. A large number of cases occurred in those who occupied dwellings by no means particularly objectionable in a sanitary point of view, and located in comparatively healthy situations. From all the evidence that has been furnished us, we believe, however, we are warranted in concluding that the disease has prevailed chiefly in low, damp situations, or in the immediate vicinity of sluggish streams, and in the autumn, winter, and spring months.

The form of the disease which predominated, in the visitations of which we have been favored with accounts, was the tetanic. In many cases, however, the disease was attended with prominent symptoms of bronchial inflammation; in only a few cases, and in but a few of the reports furnished us, is the presence of the algid form of spotted fever noticed.

The non-contagious character of the disease is very generally recognized by the physicians of the different sections of the State in which it has made its appearance.

In common with the scarlet fever and measles in those localities in which these diseases prevail to the greatest extent, numerous

cases of what has been termed *roseola* have been observed. In certain visitations of the above-mentioned epidemics it has prevailed to a far greater extent than in others. The exanthem referred to has been studied with some care by several of the continental physicians, especially those of Germany. It is certainly deserving of a greater degree of attention than has been bestowed upon it by the profession, generally, of our own country. Not that it is of itself a disease of any great importance, being unattended with any suffering, very generally disappearing spontaneously, when its course is not indiscreetly interfered with, and seldom, if ever, entailing any danger on the person in whom it appears. It is only interesting from the fact that it may be, and indeed often has been confounded with either scarlet fever or measles; one or other of which exanthems, in different cases, or at different stages of the same case, it so closely resembles, as to render it difficult to distinguish it from them as a distinct and somewhat anomalous disease. While, as above remarked, roseola in some cases simulates measles, and in others scarlatina; cases not unfrequently occur in which the eruption, on one day, is that, apparently, of measles, and on the next, perhaps, it closely resembles that of scarlatina.

Roseola seldom continues for more than two or three days; in some instances it is known to disappear entirely at the end of twelve, eighteen, or twenty-four hours. The eruption is very liable to sudden and even repeated relapses.

It is said that, by the rash or eruption upon the skin alone, it is seldom possible to distinguish one form of roseola from a mild attack of measles, and another form of the disease from a mild case of simple scarlatina. From the more severe forms of these diseases, however, the diagnosis is made with greater ease and certainty. If not by the difference in the eruption, by, at least, the absence of concomitant symptoms, such as sore throat, intensely hot and dry skin, frequent, rapid pulse, and other decided constitutional symptoms in scarlatina; and in measles, coryza, injected and watery eyes, fever, and other well-marked catarrhal symptoms.

There is no reaon for believing roseola to be contagious. It will, however, run through a large family of children, attacking them in succession. More commonly, however, it will be found to make its appearance at about the same time in several members of a family, subject alike to the same external conditions. It unquestionably often prevails epidemically, and very generally is found to precede or accompany epidemics of scarlatina and of measles. Its exciting

cause may possibly be, in numerous instances, certain local domestic conditions, errors of diet, or particular kinds of food, or food prepared in a particular manner; certain forms or kinds of clothing, etc.

Smallpox in its unmodified form, as well as in the form of varioloid of a more or less intense grade, was, a few years since, of constant occurrence throughout the State, and produced annually in the aggregate a considerable amount of mortality. Of late years, however, we hear much less of smallpox, even in those portions of the State where the constant demand for laborers in mining, in large iron works, and in other extensive manufactories, attract thither a large number of foreigners, by whom the variolous infection is liable to be introduced. From some districts the disease would seem to have become entirely eradicated, while in others, it is only after long intervals that a case or two of it has occurred, while no spread of the disease has resulted. This favorable state of things has been brought about mainly, if not entirely, by the greater care that has within a few years past been paid to vaccination; its extension throughout each community; the use of a fresh and more efficient virus, and the resort to revaccination at proper intervals, and especially upon the occurrence in a neighborhood of a case of smallpox, in order to test the amount of immunity from variolous infection, enjoyed by those reputed to be protected by a preceding operation.

For some time past there has prevailed, and, so far as we can learn, to a very great extent, throughout every portion of the State, a peculiar, and, in many cases, a most troublesome and inveterate cutaneous affection. The true character of this somewhat anomalous skin disease has greatly puzzled the physicians who have encountered it. From its being, as was supposed, traceable in many instances to the soldiers of the army or to their clothing, it has been popularly termed the *army or soldier's itch.* Its origin, however, in numerous instances has been shown to be altogether independent of the army or anything connected with it. It is very certain, we think, that the disease is not strictly a form of scabies. From the difference in the description given of it by different writers, it is very probable that the term "army itch" has been applied to very distinct affections, the only resemblance between them being the occurrence of a fine vesicular eruption upon different parts of the skin, attended with a constant intolerable itching. The serous discharge from the ruptured vesicles dries upon the surface of the skin in the form of scales, differing in thickness at different parts

Upon the removal of these scales, the skin beneath presents a red, moist surface. Some of the cases present nearly all the characteristics of *prurigo*, while in others the predominant symptoms are those of *eczema;* while again in many of the cases the disease of the skin is scarcely to be distinguished from *scabies*. In many instances the symptoms of all three affections appear to be combined in the same case.

We have seen too little of the malady referred to to permit us to form any just views as to its etiology. From some facts that have fallen under our immediate notice we have been led to the belief that the disease is communicable from the sick to the well by direct contact or by means of infected clothing; others, however, who have had better opportunities for studying the disease, positively deny its contagiousness.

The foregoing sketch of the prevalent diseases of the State of Pennsylvania is correct so far as it goes. Its value and interest would have been enhanced had it been in the power of your Committee to present accurate statistics showing the extent to which each of the diseases referred to has prevailed within a given series of years, in the different portions of the State; the ages, sex, domestic condition, and occupations of the persons most liable to be attacked; the absolute percentage of mortality of each disease, with its ratio of mortality at the different periods of life, in the two sexes, and according to the different conditions and occupations of the patients. To obtain such statistics in a series sufficiently extensive to serve as a basis for safe conclusions, is, in Pennsylvania, at the present day impossible; nor will they ever be obtained until in every county of the State the registration of all deaths, with the particulars connected with each, shall be required by a judicious law strictly enforced.

ON

THE CONVEYANCE OF CHOLERA FROM HINDOSTAN THROUGH ASIA TO EUROPE AND AMERICA.

BY

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ON THE CONVEYANCE OF CHOLERA FROM HINDOSTAN THROUGH ASIA TO EUROPE AND AMERICA.

CHOLERA is conveyed from India towards Europe from a few places only, and these are all situated on the western half of Hindostan, for the disease is too short-lived to be carried to a great distance, except this is done at a high rate of speed, or by steamships and railroads.

The most important points for the exportation of cholera are Bombay, Surat, Kurrachee, Moultan, and Peshawur.

The disease is brought into Bombay twice every year, in connection with pilgrimages from ninety-four different shrines in the Presidency, especially from the great city of Bejapoor, and is regularly carried over to Arabia, up the Red Sea to Mecca, and up the Persian Gulf to Persia and Turkey in Asia.

It is brought into Surat both from Bombay and from various sacred places along the line of the Nerbudda River, which is considered next in sacredness to the Ganges, with which it is supposed to have an underground communication. From Surat it is carried to the same places as from Bombay.

It is brought to Kurrachee, at the mouth of the Indus, both from Bombay and Surat, and down the river Indus from Moultan and Hurdwar. A large number of Indo-Mahommedan pilgrims come down the Indus from Cabul, Lahore, Moultan, and other large cities, and embark at Kurrachee, for Mecca; and a large number of merchants come from Muscat, Bushire, and Bassorah to attend the great fair held every year in April, at Hurdwar, and often carry back the cholera with them to Arabia, Persia, Syria, and Armenia.

From Moultan it is carried west through the Bolan pass to the important city of Candahar, and from there up to Cabul. It arrives at Peshawur from Lahore and Hurdwar, and is carried up to Cabul, and from thence distributed to Northern Persia on the one hand, and to Central Asia and Independent Tartary on the other.

The caravan trade between Cabul and Candahar and Peshawur employs 8000 men, 10,000 oxen of transport, and 30,000 men. These all arrive at Lahore, Moultan, and Hurdwar in time to partake of the festival at Hurdwar, in April, and return to Cabul in June, in time to forward their goods to Balk and Herat in July, and have frequently brought cholera with them, and notably so after the great twelve year festivals of 1817, 1829, 1841, 1853, and 1865.

From Balk the disease has always been carried on by great caravans to the holy city of Bokhara (just captured by the Russians), and from thence to Khiva, and from there both to Astrakan and Orenburg in Russia.

In 1830 the Russians expected to receive the cholera from China by way of Orsk, to the east of Orenburg, but the tea caravans arrived in good health. Still the disease slipped in from Khiva in the south, through the Kirghis country, and was brought there by the great caravans coming up from Hindostan. The Russian officials, either from ignorance or design, insisted for a long time that the caravans arrived in good health; but it afterwards was discovered that they always referred to the China caravans coming from the east, and shrewdly ignored the condition of the Khiva caravans coming from the south. It was subsequently proven and admitted that cholera prevailed in Khiva in 1828–29; also among the Kirghises and was brought by them into Orenburg. Since then cholera has been brought several times from Khiva to Orenburg, and notably so in 1842, 1852, and 1865.

From Cabul, cholera has always been forwarded regularly to Herat, and from there to the holy city of Meshed, in Northern Persia, where three to six hundred thousand pilgrims assemble every year, coming up from Hindostan, Affghanistan, Persia, and Central Asia. Some of these pilgrims also travel from the eastern borders of the Black, and western shores of the Caspian Sea, from Georgia and Armenia, and carry the disease back with them to Asterabad and Teheran, from whence it is forwarded up the Caspian Sea to Astrakan, and also carried west to Georgia and Armenia.

Bombay, Surat, and Kurrachee unite in sending cholera up the Persian Gulf to Bushire in Persia, and to Bassorah in Turkey in Asia.

Bassorah is the principal, and in fact almost the only port at the head of the Persian Gulf. Cholera has repeatedly been brought to it and forwarded up the rivers Euphrates and Tigris to the cities of

Hillah and Bagdad, and from there north to Mosul, Aleppo, Diarbekir, and across to Antioch on the Mediterranean. Also due west to Damascus, and from there to Beyrout on the Mediterranean. In old times the disease did not extend very rapidly along the Mediterranean when conveyed by slow Turkish and Greek vessels. In fact it also died out. But with the introduction of steam navigation and the absorption of almost all the trade by enterprising English, French, Italian, and Austrian navigators, it now progressed more rapidly along this sea than any other.

Bushire is the principal Persian port on the Gulf of Persia, and whenever cholera arrives there, which it frequently does from Bombay, Surat, and Muscat, it is forwarded up the great trunk road of trade and travel to Shiraz, Ispahan, Kashan, and Koom, to Teheran.

Thus cholera always reaches Teheran both from the east and the south.

From Teheran, which is only seventy miles south of the foot of the Caspian Sea, it is always forwarded to Reshd, the principal port on the southern shore of the Caspian, and from there it is regularly conveyed to Jahar, Leucokoran, Baku, Derbent, and Kisliar, the principal port, on the western shore of the Caspian, and up the principal rivers which empty into the sea, such as the Kur, Aras, and others. It is also carried directly from Reshd up to Astrakan.

From Teheran the disease is always sent due west to Kasbin, and from there north to Tabreez, Khoi, Nachshevan, and Erivan to Tiflis.

From Tiflis, two streams of cholera proceed, one to the northeast to Astrakan, the other northwest to the town of Azof on the east coast of the sea of Azof.

From Tauris, or Tabreez, the disease is always forwarded almost due west to Erzeroum, and from there to Trebisond on the southeast shore of the Black Sea.

From Trebisond the route of cholera leads due west to Constantinople, and northwest to Sebastopol, in the Crimea, and to Odessa in Russia.

Thus it will have been seen that cholera threatens Astrakan in Russia from four different directions, viz: from Khiva in the east, from Asterabad and Reshd in the south, and Tabreez and Tiflis in the southwest. The Russian authorities were long excusable in being puzzled to account for the mode of introduction of the disease into Astrakan. Some blamed Khiva, others Asterabad, others

Reshd, others Tiflis, others Baku, Derbent, Leucokoran, or Kisliar; and others, who thought they had disproved that the disease was imported from some one of these places, inferred that it was not imported from any.

From Astrakan, the first cholera was regularly transported up the river Volga from city to city and post to post, until at Samara it met the trail coming east from Orenburg. And here the usual squabble arose whether it came from Orenburg or Astrakan, or neither. Still both columns of the disease progressed regularly and relentlessly on till they reached Kazan, and from there were carried due west to the great fair at Nishni Novgorod; and also northeast to Perm and Tobolsk.

From Nishni Novgorod the disease was carried north by traders returning from the fair to Kostroma, Vologda, and thence up to Archangel on the White Sea.

From Nishni Novgorod the disease was carried west to Vladimir and Moscow.

Moscow formed a great centre for the distribution of the disease. It was sent due north through Tuer to Saint Petersburg; due west to the head waters of the river Duna, and from there to Riga, the principal Russian port on the Baltic; from whence it was carried by English coal vessels to Sunderland and Newcastle in England. In 1830 a great Polish revolution took place, and Russian troops were sent from Moscow by way of Smolensk, Minsk, and Grodno to Thorn on the Vistula, a little above and to the rear of Warsaw, and carried the cholera with them. While Dantzig on the Baltic was maintaining a quarantine against Riga, the disease was carried down the Vistula and slipped in before the town authorities were aware of their danger.

Other Russian troops were sent from the Don Cossack region near Astrakan, and from the neighborhood of Odessa to co-operate against Warsaw, and brought up the disease with them by way of the south and southeast; especially from Odessa, through Lemberg, Brody, and Lublin. Great battles took place between the Russians and Poles in the neighborhood of Warsaw. The Poles were frequently victorious, and contracted the disease from the battle grounds, clothing, and prisoners of their beaten enemies. Thus the disease was introduced into Warsaw, and then carried due west through Posen to Berlin and from there up to Hamburg and over to London.

From Warsaw the disease progressed south to Cracow and from

there to Olmutz, and while the Austrians were striving to ward off the pestilence from the north by means of a triple cordon of troops, the epidemic quietly progressed from Odessa to Jassy, from there due west to Debretzin, Pesth, Buda, and Presburg, and thus reached Vienna.

From London the disorder was carried over to Calais, and from there to Paris, from whence it progressed south towards Marseilles.

In the mean time the pestilence was carried from England down to Lisbon, in Portugal; from thence up the Tagus to Madrid, and from there to Barcelona on the northeast coast of Spain. From there to Marseilles, and northeast to Genoa; from there east to Parma, Venice, and Trieste. From Trieste, at the head of the Adriatic Sea, it was conveyed overland almost due north to Vienna, which it ravaged for a second time.

When the second epidemic of cholera occurred the Russians had conquered Circassia and Georgia; had crossed the Caucasian Mountains and Lake Tiflis, and had established excellent military roads from Tiflis to Astrakan, N. Tscherhask, and due north to Moscow. Consequently the cholera not only went to Astrakan, but also to N. Tscherhask, and in a straight line to Moscow.

The disease was also carried from Trebisond to Odessa and Constantinople, and from there to Galatz, near the mouth of the Danube. From there it was forwarded up the Danube to Bucharest, Widin, and Belgrade, and finally reached Vienna. But in the mean time the Hungarian revolution under Kossuth had broken out; Austrian and Russian troops marched towards the advancing cholera from Gallicia, Moldavia, Transylvania, Slavonia, Croatia, Styria, and Dalmatia, contracted the disease, and carried it back with them in all directions. Cholera travelled more rapidly by land from Galatz by way of Hermannstadt to Vienna than it did by water up the Danube; and also crept along its old route from Odessa to Jassy, Debretzin, Buda, and Pesth. Thus the disease reached Vienna in three directions, and again puzzled the authorities sorely to account for its arrival. The Austrians had now improved their roads south towards Trieste, and the disease was carried down to the head of the Adriatic Sea and was distributed to the whole of Italy.

When the next 12th year period arrived, viz., 1865, steam navigation on the Red and Mediterranean Seas had been so developed and enlarged, that cholera was rapidly conveyed from Bombay to Mecca, and from there up to Suez, Cairo, and Alexandria.

Alexandria now became the great receiving and distributing centre of the disease; which it forwarded to Beyrout, and from there east to Damascus and back towards Bagdad and Bassorah, at the head of the Persian Gulf. Also to Antioch and back to Aleppo. To Smyrna and back into Asia Minor. To Constantinople and back to Trebisond, and from there east to Armenia and Georgia, and it now probably reached Tiflis and Astrakan from the west instead of the east. To Ancona in Italy, from which letters and mails are now carried overland more rapidly to the great capitals of Europe than they are by sea. To the Island of Malta, and from there to Tunis and Algiers. To Marseilles, and from there up to Paris and Havre, and from there to this country. To Gibraltar and Spain; to Tangiers and Morocco, and finally to Southampton in England. The cholera of 1865, commenced in Hindostan in April, and reached Alexandria by means of steamships in June, and the rest of Europe in a few weeks more. The earlier epidemics required several or many years to traverse the same distance.

CHOLERA IN AMERICA.

Cholera had prevailed all over Europe and in England and Ireland in 1831. In the spring of 1832 the influx of emigrants into the Canadas was enormously greater than any preceding year, 44,000 arriving before August, against 16,000 in the whole of 1830.

In May and June, five vessels arrived at Quebec from Cork, Dublin, and Liverpool, after having had 179 deaths from cholera on board. The first cases of cholera in America occurred in emigrant boarding houses in Quebec on the 8th of June. The steamboat Voyageur conveyed cholera patients from Quebec to Montreal, a distance of 200 miles in less than thirty hours; and over this great distance, thickly inhabited on both shores of the river St. Lawrence, the disease made a single leap, without infecting a single town or house between the two cities. The town of Three Rivers, half way between Quebec and Montreal, established a quarantine and escaped for a long time; but the authorities of Kingston, Toronto, Niagara, and Detroit being less wise, these places soon became affected. As the Sac and Fox Indians, headed by Black Hawk, had broken out in open hostility, many United States troops were being forwarded by way of Detroit to the theatre of war. Thus the garrison of Fort Niagara reached Detroit on June 30, 1832; the troops

were mustered and inspected, and not one was found on the sick list; but in fourteen days 47 men out of a company of 78 had been attacked by the disease. Six companies of artillery left Fortress Monroe, Virginia, in perfect health, but contracted the cholera at Detroit, and reached Chicago with a loss of one out of every three men. Such was the rapidity with which the disease spread among the troops as they reached the infected district, that in a short time the whole force sent by way of the lakes, was rendered incapable of taking the field. Some were left behind, but the greater part reached Chicago in a most deplorable condition. It was generally believed, at the time, that the principle of infection existed in the steamboats by which the soldiers had been forwarded, as these had previously been engaged in transporting crowds of emigrants westward from Montreal and Quebec. Fort Dearborn, near Chicago, was temporarily occupied by our troops during the Black Hawk war, and here cholera displayed some of the most fatal effects. Out of one thousand men, over two hundred were carried into hospital in the course of one week; and Surgeon De Camp asserts that previous to the arrival of the steamboat which brought the disease to Fort Dearborn, there had not been a case of the kind in the fort or village. From Fort Dearborn our troops carried it to Fort Howard, at the foot of Green Bay; to Fort Crawford, near Prairie du Chien; and to Fort Armstrong; and then handed it over to the Sac and Fox Indians. Subsequently they carried it down to St. Louis, and far west to Fort Leavenworth. While the inhabitants of New York were looking for the arrival of cholera from Canada, it was brought into the city by emigrants in ships from England and Ireland, especially the ship Henry IV., the 24th of June. It was carried up the Hudson River to Albany by July 3, and forwarded out west by way of the Erie Canal to Schenectady, Utica, Syracuse, Rochester, and Lockport, to Buffalo, by the 17th of July: but it had already reached Detroit at the western end of Lake Erie, by way of Canada, by the 3d of July.

From New York it was also carried to Newport, Rhode Island, and to New Haven. To Philadelphia by the middle of July, to Wilmington, Delaware, and to Baltimore; from there to Norfolk, to Wilmington, North Carolina, and to Charleston, South Carolina.

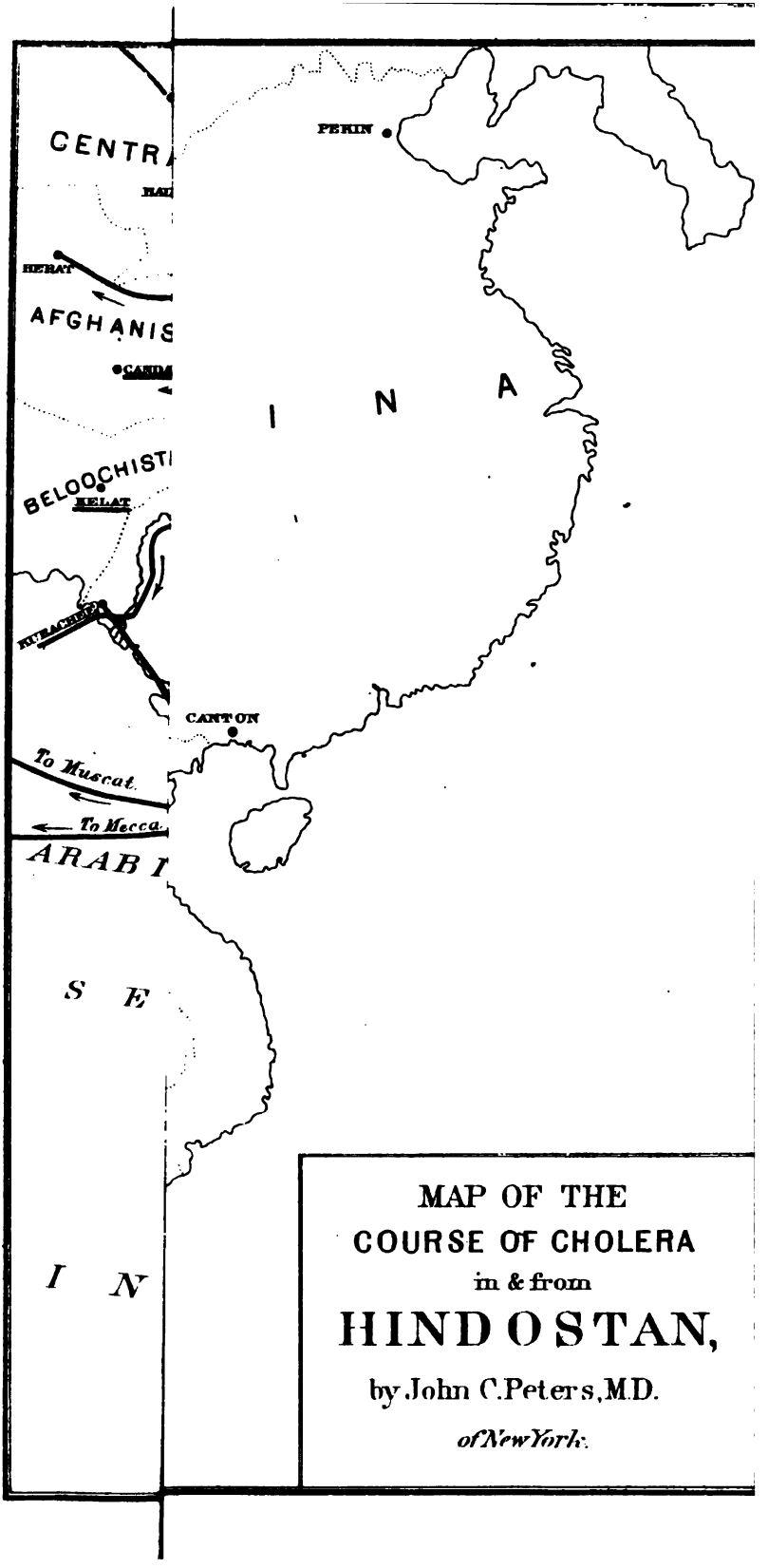
From Philadelphia it was forwarded west to Pittsburg and Wheeling and from there to Cincinnati, where it had previouly arrived by way of the lakes, from Cleveland and Sandusky. It then progressed down the Ohio River to the Mississippi, and from

there to New Orleans, by October, 1832. Surgeon Lawson, U. S. A., says: "Without pretending to determine the cause of this mysterious disease, or its mode of propagation, one fact is certain, viz., that no case of cholera occurred in New Orleans until after the arrival of the steamboat Constitution, which had several cases on board, after a number of her passengers had already died of it." Dr. Lawson was in doubt "whether it was wafted down the Mississippi in a current of air, or was brought pent-up in a steamboat; and thought that the disease exhibited great eccentricities, for in many instances some houses would be wholly exempt, whilst those on every side of them were places of mourning and distress. The occupants of some seemed secure, with their windows and doors wide open, while the inmates of others could not peep out, without letting in the disease." One tenth of the population died, or 6000 out of 55,000.

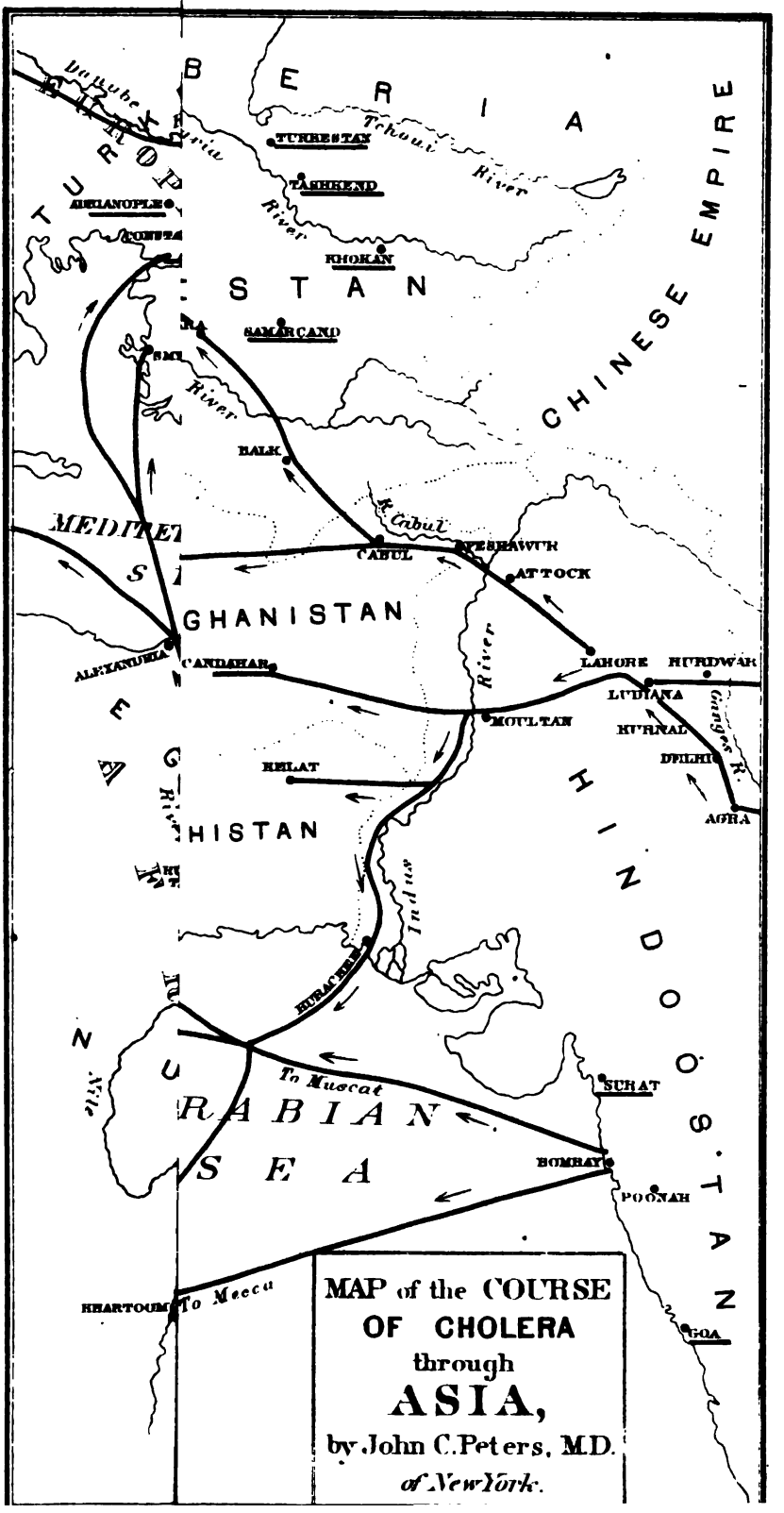
The next epidemic, or that of 1848, commenced in New Orleans on the 13th of December, soon after the arrival of the ship Swanson, from Havre, which had had fourteen deaths from cholera before arrival. From New Orleans, the disease was carried up the Mississippi by steamboats to Memphis and St. Louis; and up the Ohio to Cincinnati, early in 1849. In the meantime, the disease had again been brought to New York by emigrant ships, and again forwarded west, so that the eastern and western, northern and southern trails met in the centre of the country.

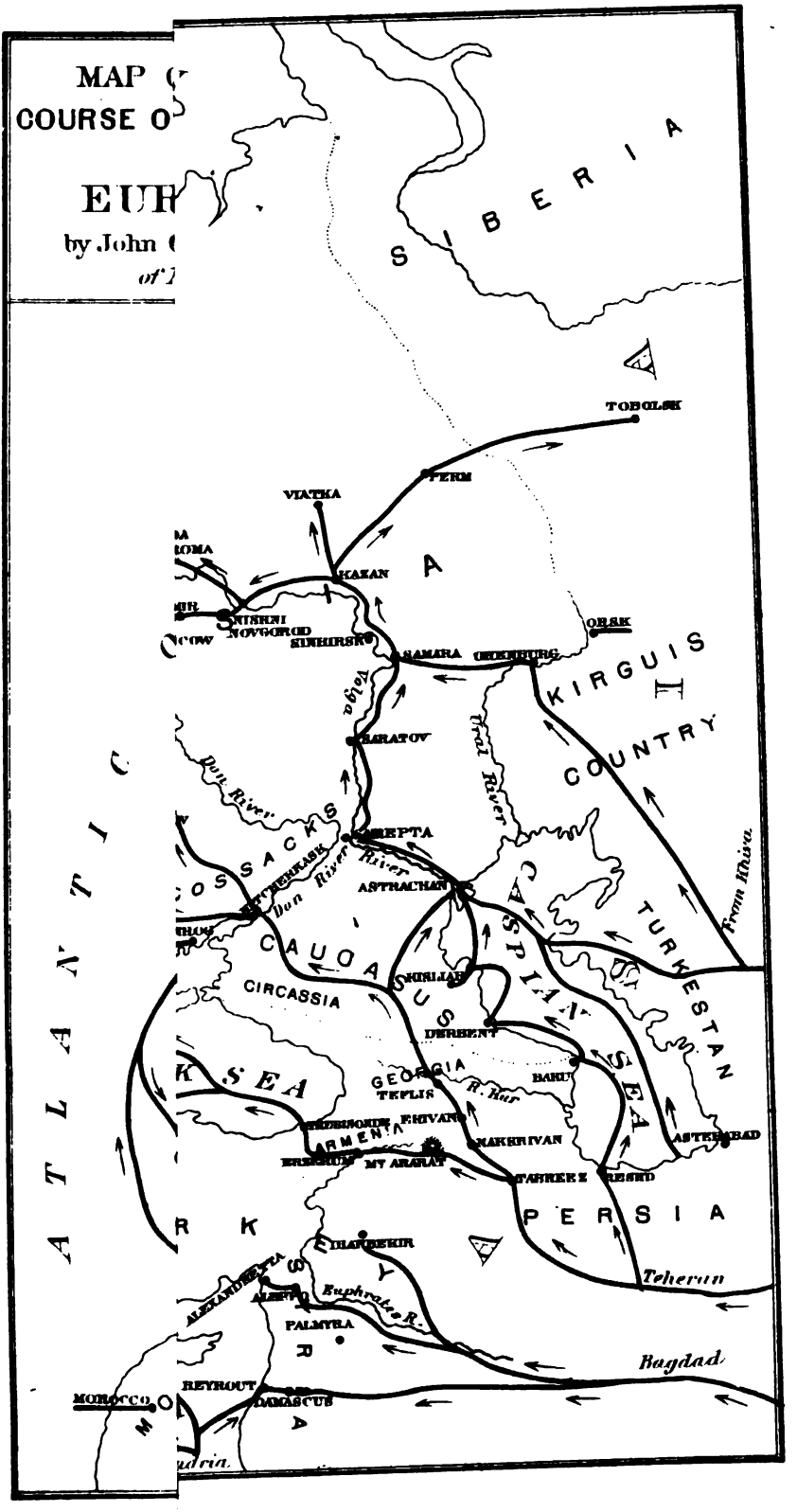
The endings of epidemics have as much interest for the historian of disease as their beginnings. Thus the choleras of 1832, '48, '54, and '65, were regularly carried up from New Orleans to Little Rock, on the Arkansas River, and from there to the U. S. posts at Fort Smith, Gibson, and Arbuckle, and handed over to the Creek, Cherokee, and Choctaw Indians. The disease has also been regularly carried to Fort Leavenworth from St. Louis, in 1833, '49, '50, '51, '52, '54, and '66; and then has been handed along the great line of emigrant travel to Oregon and California, by way of the Platte River, Fort Kearney, and Laramie, to the Pacific coast. But the epidemic of 1865 was also carried from Fort Leavenworth along the line of the Smoky Hill River, by way of Forts Riley and Hooker, to the new little town of Ellsworth, then only six weeks old; but cholera reached it unerringly, because railroad laborers, soldiers, and others coming from infected districts, arrived there with the disease upon them.

The facts of the last great epidemic in this country, that of 1865, are too fresh in every one's memory to require mention here. But a mine of accurate informatiom is contained in the U.S. Army reports. We will merely allude to the manner in which U. S. troops contracted the disease in Cincinnati, and carried it over to Louisville, and down to Nashville, Chattanooga, Atlanta, and Augusta, Georgia.



MAP OF THE
COURSE OF CHOLERA
in & from
HINDOSTAN,
by John C. Peters, M.D.
of New York.


MAP of the COURSE
OF CHOLERA
through
ASIA,
by John C. Peters, M.D.
of New York.
CHINESE EMPIRE
TURKESTAN
TASHKEND
KHOKAN
SAMARCAND
BALK
CABUL
PESHAWUR
ATTOCK
LAHORE
HURDWAR
LUDIANA
KURNAL
DELHI
AGRA
MOULTAN
KELAT
KURACHEE
SURAT
BOMBAY
POONAH
GOA
KHARTOUM
To Mecca
To Muscat
ARABIAN SEA
HINDOOSTAN
Indus
Ganges R.
Tahour River
Danube
ALEXANDRIA
CANDAHAR
Kabul
River


MAP
COURSE O
EUH
by John
of
SIBERIA
TOBOLSK
PERM
VIATKA
KAZAN
NISHNI NOVGOROD
SIMBIRSK
SAMARA
ORENBURG
ORSK
KIRGUISI COUNTRY
SARATOV
Volga
Ural River
Don River
TSARITSYN
ASTRACHAN
COSSACKS
CAUCASUS
CIRCASSIA
KIZLAR
DERBENT
CASPIAN SEA
TURKESTAN
From Khiva
GEORGIA
TEFLIS
R. Kur
BAKU
ARMENIA
ERIVAN
NAKHRIVAN
ERZERUM
MT ARARAT
TABREEZ
RESHT
ASTERABAD
PERSIA
Teheran
DIARBEKIR
Euphrates R.
ALEPPO
PALMYRA
Bagdad
REYROUT
DAMASCUS
MOROCCO
ATLANTIC
BLACK SEA

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A SERIES OF PLANS

FOR THE

COLLECTION AND STATISTICAL ARRANGEMENT OF FACTS

IN REGARD TO

CLIMATOLOGICAL AND SANITARY CONDITIONS OF THE VARIOUS STATES.

WHEN THESE PLANS ARE FILLED UP THEY WILL ENABLE US TO TRACE THE COMPARATIVE INFLUENCE OF THESE FACTS IN THE PRODUCTION OF EPIDEMICS.

BY

WM. FAULDS THOMS, M. D.,

CHAIRMAN OF THE COMMITTEE ON CLIMATOLOGY AND EPIDEMICS FOR THE STATE OF NEW YORK;
STATISTICAL SECRETARY NEW YORK ACADEMY OF MEDICINE:
PROFESSOR OF ASTRONOMY IN RUTGERS COLLEGE,
ETC. ETC.

A SERIES OF PLANS FOR THE COLLECTION AND STATISTICAL ARRANGEMENT OF FACTS IN REGARD TO CLIMATOLOGICAL AND SANITARY CONDITIONS OF THE VARIOUS STATES.

THE design of these plans is to systematize the study of the causes of disease, for we know "that man is not born, does not live, does not suffer, does not die in the same manner in all parts of our country. Birth, life, disease, and death, all change with the climate and soil, all are modified by race and nationality."

When the laws of health and disease among the human family are better understood, the science of medicine, and more particularly that department known as hygiene, will be placed among the exact sciences.

Geographical facts collected by medical writers, from Hippocrates downwards, show that every country is unhealthy in proportion to the quantity of marsh, or of undrained alluvial soil that it contains, the inhabitants of such districts dying often in the ratio of one in twenty, instead of one in fifty-nine, the average mortality in healthy countries.

Ancient Rome was once the seat of so many fatal epidemics, that the Romans erected a temple to the goddess Febris. These epidemics were known to arise from the great masses of water poured down from the Palatine, Aventine, and Tarpeian Hills becoming stagnant in the plains below, and converting them into swamps and marshes. The elder Tarquin ordered them to be drained, and led their waters by means of sewers to the Tiber. These subterraneous conduits ramified in every direction under the city, and were of such considerable height and breadth, that Pliny terms them "operum omnium dictu maximum suffosis montibus atque urbe pensili subterque navigata;" and this system of drainage, which was continued as late as the Cæsars, rendered Rome proportionably healthy, and the seat of a larger population than has since, perhaps, been collected within the walls of any

city. On the invasion of the Goths, however, the public buildings were destroyed, the embankments of the Tiber broken down, the aqueducts laid in ruins, the sewers obstructed and filled up, and the whole country being now overflowed, Rome once more became the seat of an almost paludal fever, as in the times of its earliest foundation.

Of cities that have been drained and remain healthy, there are many examples in ancient and modern history. Hippocrates tells us that the city of Abydos had been several times depopulated by fever, but the adjoining marshes having been drained, it became healthy. London, in the time of Sydenham, was infested with epidemic intermittent fever and dysentery, the mortality from the former alone averaging in a comparatively small population, from one to two thousand persons annually. In the present day, owing to the formation of sewers and a general system of drainage, a case of ague contracted in London is hardly known.

The death rates in ancient Rome and Athens were less than the present rates in modern cities.

The inhabitants of these cities desiring beauty, as well as health and strength, obeyed the "law of hygiene," and cultivated sanitary science. They built aqueducts, gymnasia, baths, and sewers, they learned to temper gymnastic exercise by the softening influence of art and eloquence. The cultivation of the human body held its Olympic jubilees at Delphos, and received its apotheosis in the living marbles of Apelles, Phidius, and a host of unknown sculptors, whose recovered works crowd our galleries, and show the effect of careful training upon the health and beauty of the human body.

While in Greece the "laws of hygiene" were brought successfully to bear on the preservation of health, a still more surprising spectacle had been presented by the Jewish lawgiver, who framed his sanitary regulations in so masterly a manner, that the people by whom they were observed have had a vitality unknown to other nations. It would seem that their observance has often preserved the Jews untainted when surrounded by epidemics in the Middle Ages.

This is the most successful attempt ever made to improve the condition of man; for while the health, private or general, was carefully watched, the mind was not left uncultivated, and the moral sentiments were directed and governed by the same principles which even now should be our guide.

In modern times it is interesting to notice the reduction in the mortality, and the increase in the length of life, as sanitary science has been better understood.

In Geneva, in 1500, the probable duration of life was five years.
In 1700, ten years.
In 1800, thirty years.
In 1868, forty-five years.
In London, in 1700, the mortality was 1 in 25; it is now 1 in 45.
In Liverpool it was 1 in 28; it is now 1 in 44.
In Philadelphia it was 1 in 39; it is now 1 in 57; and in
Providence it was 1 in 36; it is now 1 in 57.

The most impressive lesson as to the value of sanitary measures is given by the great fire in London, in 1665, which destroyed thirteen thousand houses, and eighty churches, in four hundred streets. Just previous to the fire, the great plague had made terrible havoc among the inhabitants.

The city having been rebuilt with more roomy houses and broader streets, there has been no return of the pestilence, and the death-rate which was 1 in 20, is now 1 in 45; and London, which is one of the largest and most crowded cities in the world, is now one of the healthiest.

GEOGRAPHICAL AND SANITARY MAP, WITH EXPLANATIONS.

LIGHT PINK—General surface of land above 800 feet altitude.
YELLOW—Mountains above 2000 feet altitude.
LIGHT BLUE—General surface of land below 800 feet altitude.
GREEN—Swamps and marshy land.
RED—Political boundaries.

GEOLOGICAL MAP, WITH EXPLANATIONS.

GREEN—Marsh.
YELLOW—Sand beach; alluvial.
LIGHT PINK—Plutonic rocks.
RED—Volcanic.
SLATE COLOR—Non-fossiliferous, stratified (or metamorphic) rocks.
BLUE—Fossiliferous rocks.

Section from north to south.
Section from east to west.
Using the same colors.

History of the settlement, stating the place of birth of the first settlers.

GEOGRAPHY AND HYDROGRAPHY.

General outline and position of the State.
Greatest length and breadth in miles.
Between what latitude and longitude it is situated.
Boundaries by lakes, rivers, mountains, etc.
Boundaries by States.
Territorial area in miles.
Territorial area in acres of mountains.
Land under cultivation, swamps, water, etc.

Physical Features.—Situation and direction of the mountain ranges, their mean and highest elevation above the level of the sea. Situation and elevation of plateaus, terraces, and plains.

Hydrographical Peculiarities.—Extent and course of rivers and lakes.

GEOLOGY.

Depth of superficial deposits.
Proportion of clay, boulders, sand, etc., in various parts of the State.
Extent and direction of stratified rocks.
Extent and direction of unstratified rocks.
Extent and direction of plutonic rock.
Proportion of granite, mica, feldspar, hypersthenic rock, greenstone, limestone, and serpentine.
Extent and direction of volcanic rocks.
Proportion of lava (state whether trachytic, which consists of feldspar, or basaltic, which consists of hornblende), dust, sand, angular fragment of rock, cinders, etc., trappean rock, greenstone trap, basaltic rock.
Extent and direction of non-fossiliferous stratified, or metamorphic rocks.
Proportion of gneiss, mica-slate, argillaceous slate, etc.
Extent and direction of fossiliferous rocks.
Proportion of the silurian, the old red sandstone, the carboniferous, the new red sandstone, the oolitic, the cretaceous, and the tertiary systems.

TOPOGRAPHY AND SANITARY CONDITION.

Relative amount of hill and plain.
Elevation of the hills.
Direction and angle of slope.
Kind, depth, and size of valleys.
The chief watercourses.

The direction and discharge of watercourses.

The amount of fall of plains.

Facts in regard to inclosed valleys, punch-bowls, ravine, etc.

The extent and direction of land covered by crops, herbage, brushwood, and trees.

Facts in regard to soils.

Proportion of gravel in soil.

Proportion of sand in soil.

Proportion of rock in soil.

Amount of marsh.

Facts in regard to the absorption and retention of water in soils.

In regard to the movement of water through soils.

In regard to water supply.

Statement in regard to quantity, quality, and source from which drinking water is procured.

Amount of suspended matter in water.

Causes of contamination.

Facts in regard to food, the kind and quality.

Facts in regard to habitation, how constructed, their situation and direction of windows, their ventilation, sewerage, water supply, mode of warming, etc.

REPORT OF THE SECTION

ON

Surgery and Anatomy.

REPORT OF THE SECTION

ON

SURGERY AND ANATOMY.

TUESDAY, May 5, 1868.

THE Section on Surgery and Anatomy met in the basement of the Carroll Hall at 3½ P. M., and organized by the appointment of Dr. JOHN L. ATLEE, of Pa., as Chairman, and Dr. JOHN SHRADY, of N .Y., as Secretary.

Dr. J. S. HILDRETH, of Ill., read the report of the Committee on *Ophthalmology*. On motion, it was referred to the Committee of Publication.

Dr. F. H. HAMILTON, of N. Y., remarked that the paper was admirably calculated to arouse attention to the claims of ophthalmology upon the profession.

Dr. L. A. SAYRE, of N. Y., read the report of the Committee *On the Treatment of Club-Foot without Tenotomy*, and exhibited an apparatus to which an elastic rubber tube was attached for the purpose of keeping up a constant, persistent amount of power.

Dr. J. L. ATLEE, after a general discussion regarding the merits of tenotomy, and the claims of those who first practised it in this country, stated that Dr. HENRY NEILL, of Philadelphia, in 1825 or 1826, had used a double foot-board for the cure of this deformity. His plan is fully detailed in one of the numbers of the *American Medical Recorder*, published about that period. The two boards are connected by a strip composed also of wood, and have a leather heel loop the better to secure the bandage. Both feet are adjusted to the apparatus, and the child, to get rid of the annoyance, calls into play the peroneal and abductor muscles—in other words, *kicks itself well*. The surgeon should commence this treatment as soon

after birth as possible. The Doctor, as far as his own experience was concerned, had every reason to congratulate himself upon results.

Dr. HAMILTON did not believe in harnessing up the muscles in such a way as to cripple their action, and thought that Dr. SAYRE'S mode of treatment possessed many advantages. He advocated a good trial of the milder methods before recourse was had to tenotomy. In cases of strabismus, dividing the muscles proved of doubtful advantage until the principle which governed it was better understood. For some years past he had himself ceased to be an advocate for tenotomy, except in rare cases.

Dr. SAYRE had made it a rule not to expect much from the muscles implicated in these cases, if they did not respond to the stimulus of electricity. It was in such instances as these that the knife should be employed.

On motion the report was referred to the Committee of Publication.

Dr. TAYLOR, of N. Y., also exhibited an instrument for the treatment of club-foot, in which the support came from the *inside* of the leg—the lever acting against the end of the foot. He was not, however, prepared to say that the loss of tonicity in the case of the muscles involved was due to a paralysis from disuse. He believed in the method of Dr. WM. ADAMS, of London, who converts the varus or valgus into an equinus, and then cuts the tendo Achillis; when this is thoroughly done but little flexion is required. Dr. T. also explained his modification of DAVIS' and SAYRE'S splint, in which there were *two* perineal straps to control the abduction and adduction of the limb. Much of the extension is here dispensed with, and the patient relieved of the fear of concussion.

Dr. J. H. PACKARD, of Pennsylvania, distributed the subjoined *Rules*, which were printed at a cost of about thirty dollars per one thousand. These were designed to be displayed in freight stations and other places accessible to railroad employees, and, not being copyrighted, might be duplicated by any physician living in a manufacturing district or along the route of a railroad.

These instructions were, on motion, ordered to be entered at length in the minutes of the Section.

"*Rules for the course to be followed by the bystanders in case of railroad injury, when surgical assistance cannot be at once obtained.* Prepared by JOHN H. PACKARD, M.D., Philadelphia, Pa.

"The dangers to be feared in these cases are: *Shock or Collapse, loss of Blood, and unnecessary suffering in the moving of the patient.*

I. SHOCK.

"In SHOCK the injured person lies pale, faint, cold, sometimes insensible, with labored pulse and breathing.

"Apply external warmth, by wrapping him up (not merely covering him over) in blankets, quilts, or extra clothes. Bottles of hot water, hot bricks (not too hot) may also be wrapped up in cloths and put to the armpits, along the sides, and between the feet if they are uninjured.

"If the patient has NOT been drinking, give brandy or whiskey in *tablespoonful* doses every 15 or 20 minutes—less frequently as he gets better. Food (strong soups are the best) should also be given now and then.

II. LOSS OF BLOOD.

"If the patient is NOT bleeding, *do not* apply any constriction to the limb, but cover the wounded part lightly with the softest rags to be had (linen is the best.)

"If there is bleeding, do not try to stop it by binding up the wound. *The current of blood to the part must be checked.* To do this, find the artery, by its beating; lay a firm and even compress or pad (made of cloth or rags rolled up, or a round stone or piece of wood well wrapped), OVER THE ARTERY (*see* Fig. 1); tie a

Fig. 1.

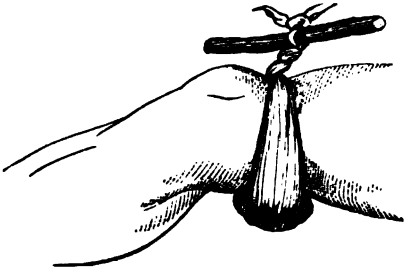


Fig. 2.

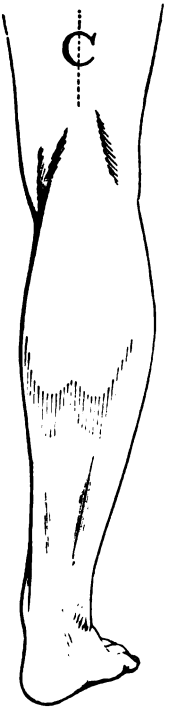
handkerchief around the limb and compress; put a bit of stick through the handkerchief and twist the latter up until it is *just tight enough to stop the bleeding;* then put one end of the stick under the handkerchief to prevent untwisting (*as in* Fig. 2).

Fig. 3.

"The artery in the thigh runs along the inner side of the muscle in front, near the bone. A little above the knee, it passes to the back of the bone. In injuries at or above the knee, apply the compress high up, on the inner side of the thigh, at the point where the two thumbs meet at C, in Fig. 3, with the knot on the outer side of the thigh. When the leg is injured below the knee, apply the compress at the back of the thigh, just above the knee at C, in Fig. 4, and the knot in front, as in Figs. 1 and 2.

"The artery in the arm runs down the inner side of the large muscle in front, quite close to the bone; low down it gets further forward towards the bend of the elbow. It is most easily found and compressed a little above the middle. (*See* Fig. 5).

Fig. 4.



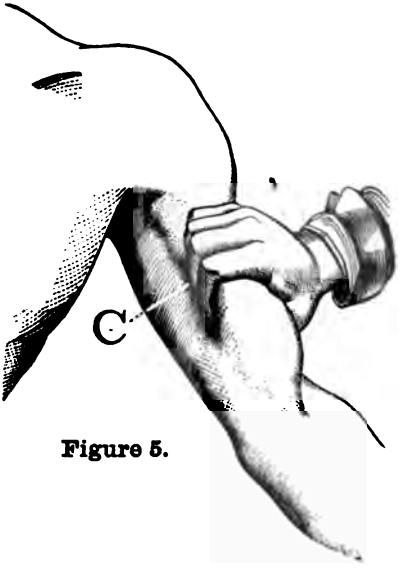


Figure 5.

"Care should be taken to examine the limb from time to time and to lessen the compression if it becomes very cold or purple; tighten up the handkerchief again if the bleeding begins afresh.

III. TO TRANSPORT A WOUNDED PERSON COMFORTABLY.

"Make a soft and even bed for the injured part, of straw, folded blankets, quilts, or pillows laid on a board, with side-pieces of board nailed on, where this can be done. If possible, let the patient be laid on a door, shutter, settee, or some firm support, properly covered. Have sufficient force to lift him steadily, and let those who bear him NOT keep step."

The meeting then adjourned until Wednesday at 3 P. M.

WEDNESDAY, MAY 6, 1868.

The Section was duly organized at 3 P. M., with Dr. JOHN L. ATLEE, the President, in the Chair.

Dr. GURDON BUCK, of New York, then described his method of constructing the lower lip after its destruction by disease, and providing for it a vermilion border from the mucous tissue in the vicinity. The two cases which he adduced in illustration of his plan were shown by a gypsum model, several diagrams, and two photographs.

On motion, the paper was referred to the Committee of Publication.

Dr. W. L. ATLEE, of Pennsylvania, related a case of epithelioma upon which he had operated at intervals several times, in consequence of the return of the disease in the cicatrix. As long as his patient took the liquor potassæ arsenicalis, in three drop doses thrice daily, his disease appeared to be under control, but a few months after its suspension it would return. At last the patient came with a frightful development of his malady, for which an operation requiring twenty seven silver sutures to keep the raw edges of the wound in apposition, was performed. The wound healed kindly by the first intention, and the patient was put on the constant use of arsenic. He is now between seventy and eighty years of age, and, from having been broken down and decrepit from the cancerous cachexia, he has become a hale, hearty gentleman, without any inclination to desert his old friend.

Dr. F. H. HAMILTON, of New York, exhibited Dr. Goodwillie's apparatus, which he highly commended as being simple in construction and economical in the use of anæsthetics. He stated that

with this contrivance two ounces of ether could produce complete anæsthesia in five minutes.

Dr. N. BOZEMAN, of New York, read a paper entitled *Remarks on some of the Operations for Vesico-Vaginal Fistule, with an Account of a new Self-retaining Speculum and a new mode of securing the patient.*"

This was accompanied by models of speculums, diagrams, etc.

On motion, it was referred to the Committee of Publication.

Dr. LOUIS ELSBERG, of New York, demonstrated in an adjoining room the advantages of the Laryngoscope, invented by Dr. F. A. Burrall, of New York, and also exhibited in the person of a former patient, the favorable results of a case previously published in a Prize Essay, awarded by the Association.

The paper of Dr. J. R. Whitehead, of New York, *On the Best Methods of Treatment for different Forms of Cleft Palate*, was, by request of the author, made the subject of a special committee. The Chair appointed Dr. Whitehead said committee, with instructions to report at the next meeting.

The meeting then adjourned until Thursday, at 3 P. M.

THURSDAY, MAY 7, 1868.

The Section was called to order at 3 P. M., Dr. ATLEE, President, in the Chair.

Dr. ISAAC QUIMBY, of New Jersey, demonstrated his treatment of *Talipes Varus* with adhesive straps and bandages.

On motion, Dr. QUIMBY was requested to furnish the Committee of Publication with a brief abstract of his remarks.

Dr. ELSBERG, of New York, read a paper upon the *Treatment of Syphilis by Hypodermic Injections.*

Dr. E. KRACKOWIZER, of New York, had employed Dr. Levine's method only in a few cases, and could not, therefore, say that he had fairly tested it. In the New York Hospital, for instance, he had begun to put it upon its merits, just as his term of service was on the point of expiration. He then adopted it at Mount Sinai Hospital in the case of a young man, saturated with syphilis, who, owing to the irritability of his stomach, could not endure corrosive sublimate as usually administered. After the fifth injection he congratulated himself with the assurance of its efficacy, inasmuch as the sores began to assume a healthy aspect, and there was no ptyalizing. But, notwithstanding he persisted in this plan, inject-

ing one-eighth of a grain daily, there was no permanent impression made. He regarded five grains to the two fluidrachms of water, which Dr. ELSBERG used, as a rather caustic dose—his own formula only called for four grains to the fluidounce. Dr. KRACKOWIZER used fifteen drops of this latter solution. The treatment was a rational one, and worthy of being put upon its own merits. The only precaution to be kept constantly in mind was the avoidance of those parts abounding in lymphatic glands; for this reason the thorax in the mesian line was his own point of election, as being sufficiently distant from the axilla.

Dr. ELSBERG admitted that his treatment involved a greater or less amount of local inflammation, but that, *cæteris paribus*, this hardly rose to an objection. He would state, however, that he had never exactly known Dr. Levine's formula, and was therefore thrown upon his own resources.

In reply to a question by Dr. ATLEE, he stated that a subcutaneous injection of morphine in a case of his own, had given a much greater amount of local trouble.

Dr. ROBERT REYBURN, of D. C., thought that the 81 per cent. of relapses which are said to occur in this method ought to reflect somewhat on its efficiency.

Dr. KRACKOWIZER said that Dr. Levine probably meant by relapses those cases which return to us with a mild form of a disease for further treatment. This was his own experience, and in all likelihood that of others, it being immaterial what plan of treatment was followed. An important element in the consideration of the question, however, had been overlooked, and that was the fact that Dr. LEVINE was preceded by Dr. BERANGSBURG, who ignored the mercurial plan of treatment.

Dr. ATLEE had, he thought, succeeded very well by the received plan, although his experience, representing as he did a moral rural district, was necessarily not very extensive.

Dr. P. F. EVE, of Tenn., had observed Dupuytren's law of continuing the treatment a certain time after the cure was apparently effected. In other words, if all the symptoms disappeared in a month, he would ply his remedies one month longer.

Dr. BUCK, of New York, rather confirmed the view of frequent relapses. He used the hydrarg. bichlorid. in doses varying from $\frac{1}{12}$ to $\frac{1}{8}$ of a grain, continued for several weeks, followed by the potass. iod. in doses of from five to ten grains. Dr ELSBERG'S

paper was then, on motion, referred to the Committee of Publication.

Dr. A. C. POST, of New York, on behalf of Dr. E. W. LATIMER, of District of Columbia, presented Mr. S. B., a native of Bavaria, aged fifty-two; a resident of Washington for sixteen years; and suffering with an enormous aneurism supposed to be of the arteria innominata. Patient first noticed a tumor about the size of a filbert immediately above the sternum three and a half years ago, increasing very slowly until within the last six months, from which time it has increased rapidly. It now occupies the greater portion of the right side and front of the neck, pushing the trachea and œsophagus over to the left side, interfering greatly with respiration and deglutition. It is about the size of an ordinary child's head at birth, and extremely painful. Dr. P. called attention to the remarkable expansive pulse, the vibratory thrill, and the apparently still fluid contents of the sac.

Dr. REYBURN related several cases of aneurism, surgically treated by himself. Gradual pressure had been kept up for three weeks without success, and quick pressure had been tried with a like result, as far as any benefit was concerned other than a rather rapid establishment of the collateral circulation.

Dr. A. B. PALMER, of Michigan, recalled a case of aneurism of the aorta so extended as to point *below the nipple*, and which, at the time, gave rise to quite a diversity of opinion. One had pronounced the tumor an aneurism of the internal mammary, and another, at first, from its unusual situation, mistook it for an abscess. The patient finally died from internal hemorrhage, the serum of the blood oozing into the right bronchus.

Dr. PAUL F. EVE, of Tennessee, read a paper upon *A Safe and Effectual Operation for the Radical Cure of Varicocele.* It was, on motion, referred to the Committee of Publication.

Dr. EVE also presented a treatise, statistical in character, and containing several illustrations in water colors. This was entitled *Investigations upon Pyæmia, with Observations upon Associated Diseases, supervening upon Gunshot Wounds.* By Dr. JOSEPH JONES, of Tennessee.

Dr. PALMER, after an animated debate, mainly upon the question of its mode of publication, offered the following, which was unanimously adopted:—

Whereas, In the present financial condition of the Association,

it is impossible to incur the expense of publishing the contribution of Dr. JOSEPH JONES, and

Whereas, Its presumed great value as a scientific paper justly entitles it to a permanent place in the medical literature of the country,

Therefore, Be it resolved, that said treatise be referred to the Committee of Publication, who shall be empowered to bring it to the notice of the Medical Department of the U.S. Army. The Session then adjourned.

JOHN SHRADY,
Secretary of Section.

REPORT

OF THE

COMMITTEE ON OPHTHALMOLOGY.

BY

JOS. S. HILDRETH, M. D.,
OF CHICAGO.

REPORT OF THE COMMITTEE ON OPHTHALMOLOGY.

It must be evident to all members of the profession that in recent years special attention has been devoted to the eye. Yet no one, without having carefully examined the subject, can form a correct idea of the extent to which this branch has been carried.

Of no part has the anatomy been so fully traced; its physiology is in advance of any other organ. Pathological investigation has here been carried to a degree unattained elsewhere in the system; and, with a certainty, in many respects, approaching mathematical.

However much may be due the early writers, particularly Scarpa in 1816, Beer in 1813 to 1817, and others, including Ammon, Sichel, and Wardrop, down to 1850, for the views they have transmitted and their practical ideas, it must be admitted that the great epoch in its advancement is the invention of the ophthalmoscope by Helmholtz in 1851.

The discoveries of Laennec, even, have not added more to general than this instrument has to special medicine.

What was doubt and uncertainty became clear and demonstrable. For the first time the eye could look into the very arcana of the living system.

This discovery soon brought others. That of Von Graeffe, in demonstrating the relief of glaucoma by iridectomy, and thereby rendering amenable to treatment a large class of affections, previously uncontrollable, is doubtless the most brilliant in the surgery of the age.

Next, if not of equal importance, are the achievements of Donders. They show how numerous defects of vision, caused directly or indirectly by mechanical and optical variations, may be determined from apparently similar disturbances of other origin.

Many a patient had been condemned as having "amaurosis" or some incurable affection, when it was simply a case of hypermetropia, or a disturbance of the accommodation. Others have been

treated for "nervous irritability" of the eye, though requiring only cylindrical glasses to correct astigmatism or abnormal curvature of the cornea.

Cases of strabismus, depending upon irregularity of refraction. were surgically, when they should have been optically dealt with.

The importance of avoiding such errors can hardly be overestimated.

The improved methods of operating for cataract, and for affections of the lachrymal passages, are further additions of great practical interest.

The labors of others, who have largely contributed to advances made, are too extensive to be alluded to in detail. One reference more must suffice. The researches of Bowman on the cornea and the lachrymal apparatus are ornaments of professional effort in England; where, if, as a general rule, ophthalmologists have not equalled in originality the productions beyond the channel, they have a practical turn, which seizes upon and avails itself of the ideas of others with a zeal worthy of wider adoption.

The literature of this specialty can hardly be correctly estimated, so rapid has been the increase.

Six ably conducted periodicals are issued: one at Brussels, Berlin, Leipsic, and Turin; and two in London. Among the standard works those of Arlt, Stellwag, Mackenzie, Donders, Wecker, and Desmarres first deserve mention.

The ophthalmoscopic plates of Sichel, Jaeger, and particularly Liebreich, are productions exhibiting faithful observations of ocular disease.

Besides these are numerous smaller works by Schweigger, Jiraud, Teulon, Zehnder, Sperino, Müller, Jago, Lawrence, Critchett, and others, in shape of monograms, papers, and reports, which form volumes of original material of intrinsic value.

On the continent thirty-two, and in England thirty-one hospitals or infirmaries are devoted to the eye. Some are quite large. One at Turin numbers three hundred beds. London alone has six ophthalmic hospitals, and a special department for such cases attached to seven of its large general hospitals.

Numerous dispensaries or clinics are to be found scattered through many of the European cities. Three in Paris are remarkable for the large number of patients daily applying.

Thirteen professorships, numerous lectureships and clinics,

afford excellent opportunities for the study of the eye, particularly at Vienna, Berlin, Paris, Utrecht, and London.

The above, though a brief and therefore imperfect exhibit, is, however, sufficient to show the position of ophthalmology in Europe.

Not only has the comprehension of the eye been greatly expanded, but the results of this special study have reacted upon other departments in medicine, as shown in the invention of the laryngoscope, endoscope, in the diagnosis of diseases of the nervous system by the ophthalmoscope, and in a generally increased tendency to concentration of effort upon particular subjects.

If any one doubts that ophthalmology has become a science, let him honestly endeavor to comprehend the leading works upon the subject, and his doubts will be dispelled.

No longer will the specialty of the eye be accused of mainly having gotten up "hard words," for these so-called hard words are exponents of harder problems in science and practice which years of patient toil alone have solved.

With the exception of a few cities, quite recently has this subject begun to receive, in the United States, that attention accorded it in other countries, and its claims are now far from being recognized here by the profession at large. This may be attributable to a previous want of publications more within reach of general practitioners, to the imperfect teaching of the matter by most of our medical schools, and in some practically not at all. Also, from a feeling of indifference or opposition, growing out of an unfounded prejudice against special study and practice.

But a change has begun, and begun earnestly. A few years ago, special treatment of the eye was confined mainly to several infirmaries and dispensaries, while such instruction was yet more limited. American publishers had issued few of the foreign works—for want of patronage—and still less original matter found its way into print; the high cost and difficulty of obtaining foreign works restricted them to a few—an obstacle to the diffusion of useful knowledge which an unjust tariff perpetuates.

Now we have four infirmaries or hospitals devoted to the eye, or eye and ear: One at Boston, Philadelphia, New York, and Chicago. Eight general hospitals having a special department for these cases are located at New Orleans, St. Louis, Chicago, Cincinnati, Philadelphia, Buffalo, and Boston. A number of dispensaries for the

same purpose have also been established in many of the above and other places.

There are thirteen special professor and lectureships connected with the medical colleges, besides clinical instruction, which is given in this department, more or less extensively in twelve of our cities.

The literature is increasing. Several valuable books have recently been translated, and others republished from the English press, which issues much obtainable only through importers.

French and German are, however, indispensable to read many of the best standard works. Several excellent small treatises are published by home talent. Also, quite a number of reports and papers, which, with the transactions of the American Ophthalmological Society, make up considerable matter of scientific interest.[1]

The statements just made represent, to a certain extent, the needs of the public and the enlarging views of the profession. But the work is far from being completed.

It is reliably estimated that cases of *eye* disease form one-twelfth of the whole number of hospital patients in England. The percentage in this country has not been calculated; but it is known to be sufficiently large—according to experience in other countries—to require our serious attention.

This is to be met: 1st, by increased accommodations for this class of patients, the present being entirely inadequate; 2d, by providing for a more general, thorough instruction.

It is not sufficient that facilities be furnished "to pay some attention to the eye"—though a great improvement on the plan of half a dozen lectures, mainly consisting of a hasty review of conjunctivitis, cataract, corneitis, and strabismus, illustrated by a few colored plates and the whole chinked in with fractures, amputations, etc.—in a course on general surgery; nor, that learners simply see practice, be it ever so good or extensive; a thorough knowledge of the principles involved must be acquired, properly to understand such practice, which requires *didactic* as well as clinical teaching. Both should be enforced upon all candidates for the degree of Doctor in Medicine to an extent sufficient to obtain a general understanding of ophthalmology. An examination to that effect ought to be one of the requisites for graduation.

[1] By courtesy, the use of an unpublished report, read at Niagara, in June, 1867, by B. Joy Jeffries, M. D., on the progress of ophthalmology, has been allowed the Committee.

Then, and then only, shall we cease to have irremediable blindness resulting from mistaken and neglected glaucoma; cases in which disease of the cornea has been allowed to run on until the eye is well nigh, and often totally useless; or where iritis has compromised, if not forever destroyed, vision; and numerous other blunders quite as deplorable growing out of ignorance of the subject.

The president of an examining board for appointment to the U. S. Volunteer Staff, states, that among two hundred and fifty candidates, no matter how well prepared otherwise, he found "very general ignorance of the pathology, diagnosis, and treatment of diseases of the eye, even as commonly taught a few years since in the schools and text-books; and of the principles and practice of ophthalmology of the present day, entire ignorance, with two or three notable exceptions. * * * * Inflammation of the conjunctiva and iris, and amaurosis included everything; and of these very dim ideas generally prevailed."

In the great reform—commenced in and sanctioned by this Association—of extending the time and qualifications requisite for graduation, your Committee earnestly hope to see the subject of this report receive that consideration which its importance as a science and the interests of humanity can justly claim.

A few remarks relative to the provision made for the education of the blind seem requisite before closing.

There are twenty-four institutions of this class erected—except New York, which has two—in different States; the States not thus provided for, appropriate a sum for the educatiou of their blind elsewhere.

It is unnecessary to dwell upon the public or private advantages of such instruction. They are too evident; and all suitable persons should be allowed, if need be compelled, to avail themselves thereof.

That this subject has been made so much a matter of practical effort is highly commendable. It must be regretted, however, that means are not taken to secure more perfect statements as to the causes of blindness among the pupils. Some reports omit this altogether; others give a variety of agencies mostly too indefinite to be satisfactory, such as inflammation, scrofula, dropsy, measles, accident, whooping-cough, sore eyes, etc. Numerous cases are credited as "congenital," which, of course, like many of the causes assigned, indicate no particular lesion. Though these statements

may be correct as far as they go, more precision is needed. Each pupil should be examined by an expert, the special defect accurately defined, and also any general disability of whatever nature; the history, and, in fact, all bearing upon the person's condition fully recorded.

Such observations would rapidly enrich our knowledge as to the causes of many obscure cases of blindness, and thereby enhance the interest felt in these humane enterprises.

Respectfully submitted.

JOS. S. HILDRETH, *Chairman.*
HENRY D. NOYES.

NOTE.—This report is intended to apply mainly to the cultivation of ophthalmology; to embrace its science and practice would here be impracticable.

REPORT

ON THE

TREATMENT OF CLUB-FOOT WITHOUT TENOTOMY.

BY

LEWIS A. SAYRE, M.D.,
NEW YORK.

REPORT ON THE TREATMENT OF CLUB-FOOT, WITHOUT TENOTOMY.

THE first proposed treatment for club-foot was of the character described by the heading of this report, viz., without tenotomy; for we read in Hippocrates, that he applied proper bandages, in cases of congenital deformity, immediately after birth. Why this sound practice should ever have fallen into disuse, it is impossible to say; but certain it is, that it was neglected to such an extent that, in the surgical text-books of fifty years ago, the subject is hardly referred to (a slight mention of the subject in Bell's Surgery is the only reference that I can find in any of the books at my command, of that date); and in practice, so little was done for the cure of club-foot, that within the memory of many of those present, it was extremely common to meet persons who had all their life endured this deformity, without ever having undergone any treatment for its relief.

From the publication of Stromeyer's work, in 1831, dates a new era. The operation of tenotomy, advocated by him, found many friends, and, from the surprising nature of its results, became rapidly popular. It was introduced into this country by Dr. Wm. Detmold,[1] who had himself been a pupil of Dieffenbach and Stromeyer. The immense advantages which this plan of treatment possessed over the let-alone method for some time rendered the profession blind to the disadvantages attending it. After a time, however, surgeons noticed that all cases of club-foot were not cured by tenotomy, and many that had appeared to be cured afterwards relapsed. This failure was due, in many instances no doubt, to a mistaken idea of the true cause of the deformity. Tenotomy was based upon the theory, that the muscle, the tendon of which was severed in the operation, was in a state of spastic contraction, or

[1] Since writing the above, I have been informed that Dr. Jas. H. Dickson, of North Carolina, was the first to perform tenotomy in this country. He cut the tendo Achillis in the case of his brother, about 1835.

abnormal shortening, which drew the foot out of its normal position. Now that we are in a position to prove that by far the majority of cases of club-foot are due, not to a spasm of a certain muscle or group of muscles, but to paralysis of the muscles which should counterbalance them, tenotomy is unphilosophical. Tenotomy may in a great measure remove the deformity, but does not relieve the disease which was its essential cause. In fact, it in many instances leaves a permanent injury, by rendering the only normal structures around the joint as useless as those originally affected.

Fortunately, however, as is often the case, empirical therapeutics ran in advance of pathology, and while yet we were in ignorance of the true lesion of club-foot, successful attempts at the cure of this deformity, without tenotomy, had been made.

Now, granting that the essential lesion is paralysis, what are the indications for treatment?

First, to restore the foot to its normal position, and to so retain it; and second, to seek so to develop the paralyzed muscles, that they may at last be sufficient of themselves to counteract those acting in opposition.

To accomplish this, the best of all appliances would be the hand of the surgeon, since it has an intelligent action that no machinery can be endowed with. But it is impossible for the surgeon, or even for attendants, to constantly hold the limb in proper position, and we must seek for something to supply the place of the hand.

To describe in detail the various plans suggested, would occupy too great a space; I shall, however, mention the principal methods, and as clearly and briefly as possible point out the indications for, and objections to each.

But, before taking them up, let me say, whatever plan you adopt, *the earlier you begin the treatment, the more surely and more rapidly will you be successful.* Instead of waiting, as was formerly advised, till the child be two or three years old, *take it in hand at birth*, if you have the opportunity.

Now, first, the ordinary *roller bandage* has been used. If the patient be taken while the case is yet recent, by careful bandaging, bringing the foot into position, constant observation, and readjustment of the dressing, a cure may be frequently accomplished. The objections, however, to this plan of treatment are considerable, viz: the limited number of cases to which it is applicable; the great liability of the dressing to get out of position, and then to become useless; and the constant care required.

The *gypsum bandage* possesses the advantage over the last plan that it does not change its form; the limb is as securely locked as in a vice. In the details of its application, quite a considerable variety exists. [Some preferring to first bandage the limb, and then to cover the bandage with the gypsum mixed with water; others, to fill the meshes of a loosely woven cotton roller bandage with the dry powder, and to moisten it after it has been applied; and others, again, to make from woollen or cotton cloth a covering to fit the leg, and to apply to this the plaster.]

These varieties are, however, immaterial; the property which gypsum possesses of "setting" when wetted is the essential one to bring into operation.

The objections to this plan are, the weight of the dressing, the impossibility of inspecting the limb, and of applying to it friction, electricity, etc. etc.

Again, *splints of sole leather* and *gutta percha* have been recommended as a plan of treatment. A pattern is fitted to the limb held in the position desired. The leather or gutta percha is softened by immersion in water (if the former is used, cold water is necessary, as hot water shrivels it; if the latter, hot water is necessary to warm the material), it is then moulded to the foot, which is then gradually forced round to its natural position, when the leg part of the splint is moulded to the limb above and secured till it is hardened.

Leather is to be preferred to gutta percha, owing to its greater cleanliness and accessibility. Both leather and gutta percha are superior to gypsum, in that they can be daily removed for personal inspection, manipulation, friction, shampooing, and electricity, which are an essential part of the treatment for restoring vitality, and can no more be dispensed with than the mechanical means by which the foot is kept in place.

Certain steps are necessary preliminary to the application of the three last-mentioned means of retention—gypsum, leather, and gutta percha. The foot must be taken in the hands, rubbed gently, with a shampooing motion, and by manipulation and pressure brought as nearly as possible to its normal position. When the limit of the patient's endurance is reached, the foot should be allowed to fall back as it was before, and to rest for a few minutes. The operation should then be repeated, and after several repetitions it will be found that with very little discomfort to the patient the foot can be brought nearly, or quite, to its normal position.

Before applying the bandages or dressings chosen, the limb should be enveloped in cotton, or, what is better, wool (the advantage of the wool is its elasticity, which prevents its becoming compressed or irritating to the skin, while it seems to be rendered foul by the perspiration no more quickly than the cotton); this prevents the permanent dressing from excoriating or unduly constricting the limb at any point.

In a large majority of congenital deformities, if taken *immediately* after birth, by a few gentle manipulations the foot can be brought to its normal position, and can be easily retained there by the simple application of *adhesive plaster*. This can be applied in the following manner:—

Cut one or more pieces of adhesive plaster, in shape somewhat resembling a stocking, save that the foot-piece should be wide enough to embrace not only the sole of the foot, but enough of the dorsum to give a sufficient purchase.

The foot-piece having been smoothly adjusted to the foot, and permanently secured by other straps or a flannel roller, the foot is then brought slowly around to its natural position and firmly held there, while an assistant draws the crural portion of the plaster firmly up on the leg, and secures it by a continuation of the flannel roller.

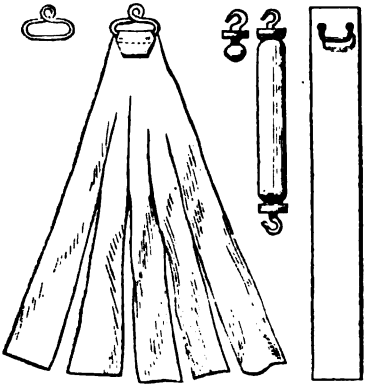
This plan, although by no means new, has recently been prominently brought before the profession by Dr. Isaac N. Quimby, of Jersey City, in a report made to the New York Academy of Medicine, and in articles in several medical journals. Previous to applying the plaster in these young children, it is a good plan to harden the skin by washing it in a solution of alum and alcohol, as suggested by Dr. Quimby.

Although this plan is so generally successful, cases do occur in which the muscular rigidity is too great to yield to manipulation, unless continued for a longer time than can be generally given. A constant tractile force then becomes necessary, and the plan suggested by Mr. Richard Barwell, of London, is by far the best.

This consists in cutting from stout adhesive plaster, spread on Canton flannel (the best I have seen is that styled "moleskin plaster," made by Mr. Maw, 11 Aldersgate Street, London), a fan-shaped piece. In this cut several slits, converging toward the apex of the piece, for its better adaptation to the part. The apex of the triangle is passed through a wire loop with a ring in the top (Figs. 1 and 2), brought back on itself, and secured by sewing. The

plaster is firmly secured to the foot in such a manner that the wire eye shall be at a point where we wish to imitate the insertion of the muscle, and that it shall draw evenly on all parts of the foot when the traction is applied.

Figs. 1. 2. 3. 4. 5.

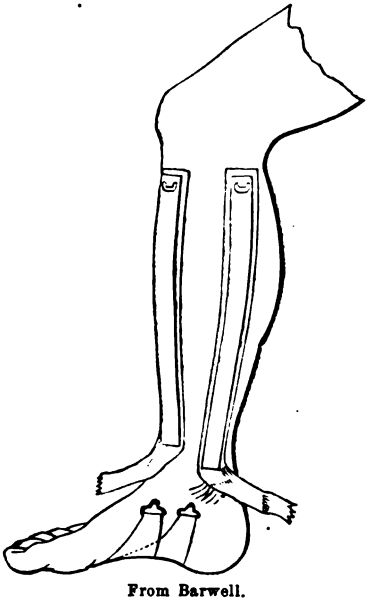


Secure this by other adhesive straps, and a smoothly adjusted roller. The artificial *origin* of the muscle is made as follows: Cut a strip of tin or zinc plate, in length about two-thirds that of the tibia, and in width one-quarter the circumference of the limb (Fig. 5). This is shaped to fit the limb, as well as can conveniently be done. About an inch from the upper end, fasten an eye of wire.

The tin is secured upon the limb in the following manner: From the stout plaster above mentioned, cut two strips long enough to encircle the limb, and in the middle of each make two slits just large enough to admit the tin, which will prevent any lateral motion, then cut a strip of plaster, rather more than twice as long as the tin, and a little wider; apply this smoothly to the side of the leg on which the traction is to be made, beginning as high up as the tuberosity of the tibia. Lay upon it the tin, placing the upper end level with that of the plaster (Fig. 6). Secure this by passing the two strips above mentioned around the limb (Fig. 7), then turn the vertical strip of plaster upward upon the tin. A slit should be made in the plaster where it passes over the eye, in order that the latter may protrude. The roller should then be continued smoothly up the limb to the top of the tin. The plaster is again reversed, and brought down over the roller, another slit being made for the eye, and the whole secured by a few turns of the roller. A small chain, a few inches in length, containing a dozen or twenty

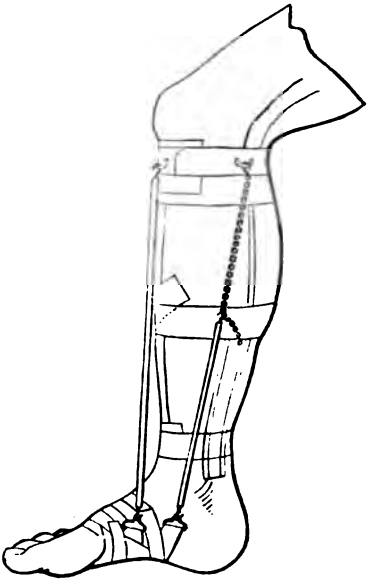
links, for graduating the adjustment, is then secured to the eye in the tin. Into either end of a piece of ordinary India-rubber tubing, about one-quarter of an inch in diameter and two to six inches in

Fig. 6.



From Barwell.

Fig. 7.



From Barwell.

length, hooks of the pattern here exhibited (Fig. 3) are fastened by a wire or other strong ligature. One hook (Fig. 4) is fastened to the wire loop on the plaster on the foot, and the other to the chain above mentioned; various links making the necessary changes in the adjustment.

The dressing, when complete, is shown in Fig. 14.

The constant traction of this rubber tubing is sufficient to overcome the strongest muscles if they have not already undergone structural changes.[1] If, however, they have become contracted (permanently shortened), or if fasciæ have become contracted as the result of inflammation (which conditions are diagnosticated by the rigidity remaining during full anæsthesia), tenotomy must be resorted to, *and these,* I believe, *are the only conditions in which tenotomy is justifiable.*

The advantage of this plan of treatment over any of the others

[1] If the rubber tubing is not stretched beyond six times its length, it will continue to contract to its original length for an indefinite period of time.

proposed, where the limb is forced into its position, and there securely *fixed* by the retaining apparatus (whether it be plaster of Paris, or complicated machinery with screws and cogs, and which can only be altered by the key of the attendant), is that this is an imitation of the natural action of the parts, permitting and promoting the constant movement of the muscles and joints, thereby increasing the circulation in the same, and necessarily improving their development and power.

The permanent fixing of any limb or joint in a stationary apparatus, thereby preventing even the healthy muscles from contraction and relaxation, will sooner or later cause even these muscles to become atrophied, and undergo fatty degeneration; and certainly this plan of treatment could never have a tendency to develop the latent power of a partially paralyzed muscle.

By the application of the elastic rubber or contracting force in just such a degree of strength as shall overcome the distorting muscles only, after a tension on them for a short time, in order to produce fatigue, and as shall not prevent them from contracting by an effort of the will and thus re-distorting the part, a constant motion is produced in the deformed and partially paralyzed limb similar to that which occurs in the act of walking, and which will materially assist the circulation, and raise the temperature of the part, and which manifestly has a tendency to improve its nutrition and increase its power.

The exact amount of force applied can be regulated at will by means of the chain attached to the tubing. The change of the hook from one link to another increases or decreases the power according as the length of the chain and tubing is diminished or increased. A very little practical experience will soon indicate the amount of force required in each case.

The only objection that can be brought to this plan of treatment is, that the adhesive plaster will sometimes slide and change its position; will soon become worn out, and require frequent re-adjustments; and, what is the most annoying, will often, particularly in very young children, and in hot weather, so irritate and excoriate the skin as to compel, for a while, the abandonment of its application.

To overcome or remedy this defect, I last year constructed a club-foot shoe, on the general plan of the "Scarpa's Shoe," with a lateral hinge in the sole, for cases of valgus and varus; the only difference being that the motive power was the rubber tubing in place

of the ordinary different kinds of springs which had formerly been used for this purpose.

As all distortions of the valgus and varus varieties involve the medio-tarsal articulation, no shoe is applicable for their treatment that has not a joint in the sole opposite this articulation, and any shoe for the treatment of these varieties of club-foot that has a solid or immovable sole, is not constructed upon physiological principles, and is therefore worse than useless.

This shoe was constructed in December last, for a little child four years of age, that had been subjected to tenotomy several times, and had worn, almost since birth, heavy instruments of various kinds, only omitting them when the ulcers and excoriations were so great that danger was apprehended from continued pressure. None of the shoes that she had worn had been constructed upon correct principles; viz., that of *imitating natural movements*, and the pair she had on at the time I first saw her, had neither motion in the soles nor at the ankles, in fact were simple straight bars of steel, bolted at right angles to steel soles; and into these prisons the doctor had endeavored to force and secure the feet by straps and bandages in different directions, but the pain was so great as to require changes every few hours, and frequently he had been compelled to omit the treatment for several days together in order that the skin might heal. And yet these shoes had been contrived and applied by a gentleman of very great reputation in orthopædic surgery.

Even when the bandages were adjusted most carefully, the child could only walk in an awkward manner, on the outer edge of the soles, being unable to balance itself unless held by an assistant; no motion whatever taking place at the ankles or any of the joints of the feet.

The father of the child, a very intelligent physician, kindly permitted me to exhibit the case to my class at Bellevue Hospital Medical College, as I was lecturing on that subject at the time.

The practical working of the shoe is so well described by the editor of the *Medical Gazette*, in the number of December 28, 1867, that I will take the liberty of transcribing his report in that journal.

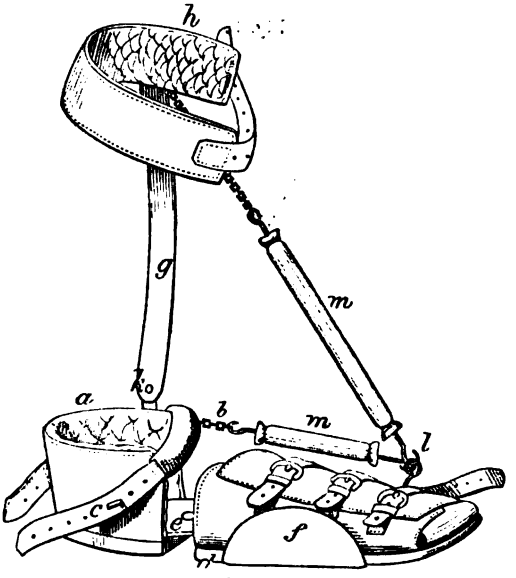
"AN IMPROVED CLUB-FOOT SHOE.—Dr. Sayre exhibited and applied at his last lecture a pair of club-foot shoes to the little child of Dr. ——, of New Jersey, which, in their mechanical construction, ease of application, and efficiency of action, surpassed anything of the kind we have ever seen, and which will doubtless soon replace

all the cumbersome machinery hitherto in use in this unfortunate class of deformities.

"Dr. Sayre regards almost all the cases of club-foot as being of a *paralytic* origin, and therefore the necessity arises of supplying some artificial, constantly contracting, force, to take the place of the paralyzed muscles, as the only means, in addition to galvanism and friction, that is necessary to restore them to their normal position; and by the proper adjustment of this force almost all of these deformities can be rectified, without resorting to tenotomy. This is certainly a very great improvement in their treatment.

"The simple yet efficient plan suggested by Mr. Barwell, of applying elastic tubing, secured at the points desired by the means of adhesive plaster, has the very serious objection of irritating the skin, which, in young children, is very annoying, sometimes necessitating omission of its application for several days, and at the same

Fig. 8.



a. Cushioned iron cup to receive the heel. *b*. Elastic tubing to go in front of the ankle joint to secure the heel in position, and fastening at *c*, an iron hook on outside of heel cup. *d*. Sole of shoe, with cushions and straps, to secure the foot in front of the medio-tarsal articulation. *e*. Joint connecting sole with heel. *f*. Elevated plate of iron properly cushioned to make pressure against base of first metatarsal bone. *g*. Steel spring connecting shoe with *h*, strap to go around the upper part of the leg. *k*. Joint opposite the ankle. *l*. Stationary hook opposite little toe for attaching the India-rubber muscles. *m*, *m*. India-rubber tubings, with chains attached, for the purpose of making flexion and eversion.

time interfering with the manipulations and frictions which are so essential in their treatment.

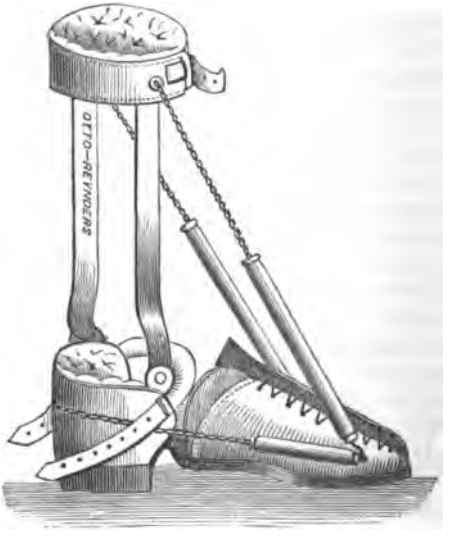
"The simple but ingenious shoe contrived by Dr. Sayre is so constructed that it can be applied and secured accurately to the deformed foot before the elastic force is attached, instead of adjusting the foot to the shoe, while the power is acting, as is the case in all other instruments, and this is the essential difference between it and the ordinary shoe with a jointed sole now in use, after which it is modeled.

"The accompanying drawing (Fig. 8) and explanations give a very correct idea of its construction, and mode of action.

"The shoes were applied in this instance with the most satisfactory results, the child in a short time after their adjustment running the lecture-room with her feet on the floor in a natural position, which had never been accomplished by any of the numerous instruments she had formerly worn."

In January of the present year I improved this shoe (Fig. 9) by putting in the sole opposite the medio-tarsal articulation, a *ball-and-*

Fig. 9.



Dr. Sayre's improved club-foot shoe.

socket, or universal joint, instead of the hinge-joint, which only permitted lateral movements. The benefit of this latter improvement is well noticed in a letter I received from Dr. W., the father of the above-mentioned child, dated 10th April, 1868: "She has been wearing the shoes with the ball-and-socket joint since I saw you last, and they are a decided improvement on those that have

only a lateral movement. * * * * I have tried Chasis's, Kolbé's, and several other kind of shoes with the most disastrous results, and I am well convinced that elastic force properly applied is far superior to anything else, and when you wish to flex or elevate the foot, the ball-and-socket joint in connection with the rubber springs is just *the* thing desired, accomplishing the object most effectually, and without any pain or inconvenience, provided the *force* has been applied with any degree of discretion."[1]

[1] The plan of treatment devised and practised by Dr. Henry Neil, of Philadelphia, in 1825, and which was so well described by Dr. John L. Atlee, of Lancaster, Pa., when discussing this report at the meeting of the American Medical Association in Washington, is so correct in theory and so similar to my own views, viz., compelling action in the partially paralyzed muscles in order to remove the deformity—that I have taken the liberty of adding the substance of Dr. Atlee's remarks to this report in the form of a foot-note, in order that the profession may become more familiar with these views, and, at the same time, to claim for American Surgery the credit of having first proposed the correct or physiological plan of treatment. Dr. Neil, although a gentleman of high professional standing and of great practical ingenuity, was not much of an author, and I can find no published account of his treatment, although it may have been published in some of the medical journals of that date. None of the medical gentlemen present had ever heard of the plan before; and it is due to the memory of Dr. Neil that it should be permanently recorded to his credit. The plan of treatment is simply to fasten the child's feet to a board made to fit the soles of the feet, and joined together opposite the ankle-joints. The restraint is, of course, irksome to the child, and in his efforts to kick himself out of the bandages, he brings into action all the muscles of the legs—accomplishing the very object desired—and in the graphic language of Dr. Atlee, "kicks himself straight."

To make an apparatus of this kind to fit the child, you place his foot on a piece of folded paper, about one inch and a half or two inches from its folded edge, mark with a pencil the size of the child's foot, commencing at his inner ankle, go round the heel, the outside of the foot and toes, and back to within one-fourth or one-half inch of the starting-point. From these two points draw a line at right angles to the folded edge of the paper, and then with scissors cut the double paper, and when unfolded you have the pattern from which any carpenter can make, in a few minutes, the necessary board out of light but strong wood. (See Fig. 10.)

A strip of leather is folded into a loop and nailed on either heel, through which the strip of adhesive plaster is passed, and carried in a "figure of 8" over the instep and around the foot-board. Such other bandages as are needed to secure the foot in position are of course applied in the proper manner.

I have tried this plan in two cases within the past month, and have been well pleased with the result so far, but do not find it as satisfactory as the adhesive plaster and India-rubber spring.

JUNE 20, 1868.

Fig. 10.

Dr. Henry Neil's Apparatus for Club Foot.

To illustrate the principles advocated in this report, I take a few cases at random from my note-book:—

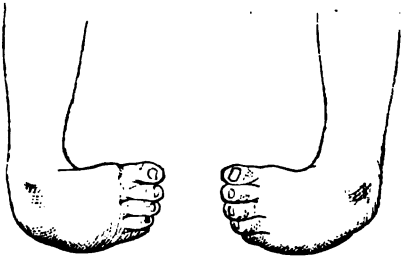
CASE I. *Double Talipes Varus, Congenital; treated by Sole Leather and Adhesive Plaster; recovery perfect.*—On the twenty-fifth of March, 1863, I was requested by Dr. C., of New Jersey, to see his little child five days old, who had been born with talipes varus or varo-equinus of both feet.

I saw the child on the same day, and found him very vigorous and robust, and exceedingly well developed, with the exception of his feet, which exhibited a very severe form of varus, with slight equinus, and are very well represented in Fig. 11.

The feet were much colder than any other part of his body, and quite blue or purplish in color.

By grasping the foot in one hand, and the leg in the other, I could with some considerable effort continued for a few minutes,

Fig. 11.



evert the foot, and slightly flex it. The capillary circulation seemed to be arrested entirely when I did this, and the foot became as white as snow. After holding it in this position a few minutes, I would relax my hold, when the foot would immediately resume its abnormal position, and in a short time circulation would return to it as at first.

I then performed the same operation on the other foot. After repeating these manœuvres a number of times on each foot, allowing some minutes to elapse between each effort at straightening them, I found that I could bring them into almost a natural position, and retain them there by a very slight force.

I then wrapped the feet and legs in cotton, and applied a piece of sole leather previously softened in cold water, and cut in the shape of a half boot.

After the roller had been carefully adjusted, and the leather accurately modelled on his foot, the foot was forcibly held as nearly

as possible in its natural position, while the roller secured the rest of the leather to his leg.

It was then held in this position with the two hands for a short time, until the leather had received its form, and when perfectly dry, it held the limbs very securely in place.

These bandages were removed on the third day, and the feet and legs well rubbed and moved in all directions. The leather was then again softened by soaking in cold water, and reapplied as at first, with the only difference that at this time the feet were forced completely around into a natural position, and held there until the leather became dry and retained them there. The bandages and leather were removed every day, and the feet and legs freely rubbed and moved in all the joints by the nurse, after which the bandages and leather were reapplied.

This plan was pursued for five weeks, when it was found that the feet could be retained in their natural position by a very slight force; and strips of adhesive plaster were applied, commencing on the dorsum of each foot, passing around the inner margin, and then the foot being held well outward and flexed as much as possible, passing on the outer side of the leg, where they were secured by a roller.

This answered the purpose of holding the feet in a natural position, and at the same time admitted of slight motion at the ankle-joints.

This plan was continued for some weeks, until the feet remained in their normal position without artificial aid, when it was discontinued.

Fig. 12.

The child began to walk when sixteen months of age with the feet perfect in form and development.

The photograph, Fig. 12, taken April, 1868, five years after all treatment was suspended, shows how well the feet are developed, and the perfectness of the recovery.

This case exhibits the principle of treatment which I should recommend above all others in all cases of club-feet, no matter what the variety, and if commenced at birth, as it should be, will result in perfect success in almost all cases, without having recourse to the knife; except it may be in some few cases of talipes plantaris, when it may sometimes become necessary to divide the plantar fascia and the short flexors of the toes in the hollow of the foot.

It is true that in some cases the disease of the nervous system is so great that we may not restore the muscles to their normal contraction as soon as we would wish, but even in these, the most unfavorable of cases, we will at least have preserved the natural position of the feet, and thus have prevented the hideous deformity that would otherwise have resulted; and by the application of artificial muscles, to take the place of the paralyzed ones, have enabled the patients to walk without limping, and retain their feet in a natural position. The exercise they are thus enabled to take while the bloodvessels are held in their natural relation to other parts is the very best method of developing the growth and nutrition of the limbs. Whereas, if they are permitted to walk without the feet being retained in their natural position, the weight of the body has a tendency to increase the deformity, and the abnormal position of the bloodvessels, both arteries and veins, interferes with the natural circulation of the parts, prevents development, and in fact tends to atrophy.

A hose will carry water a given distance with a certain force applied, when the tube is straight and unobstructed; but the same hose, with the same amount of force, will not carry the water near so far if the tube be bent at an acute angle, and particularly if these angles be increased in number. So an artery, supplying any part, will do it better when in its natural position than it can do when bent around a bone, which partially closes its calibre, and by abnormal pressure diminishes the amount of blood flowing through it, within a given space of time. The veins also, by this distorted position, are prevented from returning the blood as freely as natural, thus causing all deformed feet to present the blue and cold appearance so characteristic of them, which is the result of venous congestion.

The electric and galvanic current will also have a much more beneficial effect upon the limb when retained in its natural position, than it will have when applied with equal power while they are distorted.

CASE II. *Congenital Talipes Equino-Varus; Tenotomy performed three times without relief of the Deformity. Permanently relieved in six months by India Rubber Muscles and Electricity.*—Walter Cline, Brooklyn, aged 7, presented himself at my office May 22, 1867, with talipes equino-varus of the left foot, in its most aggravated form. The foot was much smaller than the other, as was also the leg. When standing, the foot became almost completely inverted, and the heel drawn up, the weight coming upon the dorsum of the foot just behind the little toe, and the one adjoining, near the metatarso-phalangeal articulation, at which place was a very large callosity, which was very tender. The astragalus was subluxated forward, and could be distinctly felt in front of the tibia, making a serious deformity.

The mother stated that "at birth the left foot was much smaller than the right, and was almost without any heel; the whole leg was a little smaller than the right; and that until he was five years of age, the sensation of the limb was very imperfect, but never entirely absent." When he was eleven months old, tenotomy of the tendo Achillis and of the tendons of the other contracted muscles was performed. The operation had been repeated twice since that time, but with no satisfactory result, although he had worn a variety of club-foot shoes.

The foot could be quite readily brought into an almost natural position, with only a moderate amount of force, showing conclusively that the deformity was one of paralysis, and not dependent upon any abnormal contraction.

I applied the India-rubber tubing on the outer side of the leg—according to the plan of Mr. Barwell—and the foot was almost immediately brought into its natural position. By a very slight addition to the thickness of the heel and sole of his shoe to equalize the length of the limbs, he walked almost naturally in a very few days.

He was directed to run around as much as possible, and to have electricity applied over the peroneal muscles ten to fifteen minutes daily.

July 1. The mother states that after three or four weeks the leg

and foot had so much increased in size that she had to get a larger shoe. Readjusted the bandages, and applied new plaster. Continue treatment as before.

September 1. Has improved so much that when all the bandages and India-rubber are removed he can slightly evert and flex the foot by making a strong mental effort to do so. I ordered a well-fitting shoe, with a steel spring on the outer side to run up the leg, with the hinge at the ankle-joint, and rubber-spring sewed fast opposite the little toe, and secured to a chain at the top of the steel spring near the head of the fibula.

January 1, 1868. He has improved so much that he can tread flat upon his foot without any assistance. I therefore took off the steel support and rubber-spring.

His foot and leg are well nourished, and very much increased in size. The sole and heel require about one-fourth of an inch more than the other shoe to equalize the length—otherwise there is no deformity.

April. He has regained almost perfect power of the peroneal muscles, and was discharged cured.

CASE III. *Talipes Varo-equinus Paralytica relieved by Elastic Tension. Catherine Nash, aged* 4 *years, No.* 16 *Washington Street.*—The mother states that the child, when two years of age, went to bed in perfect health. In the morning both lower extremities were perfectly paralyzed. The probable cause was an apoplectic effusion into the lower portion of the spinal cord.

After a few weeks she began to move the right limb a little when it was tickled or pinched; these movements gradually increased until she has recovered perfect motion of that side. The left leg has remained paralyzed on the outer side, making a severe form of varo-equinus, as seen in Fig. 13. When her weight was put upon it the varus was very much increased, the foot making almost a complete rotation at the medio-tarsal articulation.

Fig. 13.

The limb was very much wasted, blue and cold. The peronei muscles would not contract under a strong Kidder's battery.

On the 16th of August, 1867, I applied the India-rubber springs over the tibialis anticus and peronei muscles, in order to elevate and evert the foot. The spring was applied with only a moderate

degree of tension, but in less than half an hour it had produced a marked change in the form and position of the foot. The chain was shortened a few links, and in three hours she could stand upon her foot, touching the ground both with the heel and great toe, as in Fig. 14.

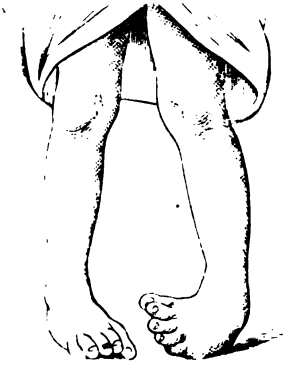
Fig. 14.

Fig. 15.

Electricity was applied in this case to the outer and anterior portions of the leg from ten to fifteen minutes every other day, and the child encouraged to run around as much as possible. The plasters and tin had to be re-adjusted occasionally; but at the end of eight months she had so far recovered as to require only the slightest elastic force, hooked into the eyelet of an ordinary shoe, and attached above to her garter. With this slight force she could elevate the toes and walk perfectly naturally.

CASE IV.—This case shows very well the effect of only a few hours' tension on the distorted foot, particularly the right one.

Fig. 16.



J. P., aged 3 years—congenital double talipes equino-varus, October 31, 1867.

Fig. 17.

J. P., October 31, 1867—three hours after the application of rubber muscles.

The India-rubber springs were worn with the tin splint and adhesive plaster, as seen in Fig. 17, for two months.

After this time he wore the improved shoe with ball-and-socket joint, which answered much better, as the spring from the back of the heel to the little toe materially aided in everting the feet, and when properly adjusted he could walk remarkably well.

This boy went to the country, and I lost sight of him, and I am therefore unable to tell the ultimate result of the treatment in his case.

Cases V. and VI. were treated by Dr. W. H. Young, at the out-door department of Bellevue Hospital, who furnished me the following notes:—

CASE V.—Emma Rosendale, 551 2d Avenue, aged 9 months, was brought to the out-door department of Bellevue Hospital, Oct. 24, 1867. The child was born with a double talipes varo-equinus, as represented in the accompanying photograph, Fig. 18; has also a double convergent strabismus and obstruction of the lachrymal duct. The mother says the child was born with a pustular eruption covering the entire body, which she attributed to a syphilitic taint in the father. The mother is a very nervous, excitable woman, being subject to convulsions during any period of excitement or grief, etc. She has two *healthy* children by a former husband. Treatment: the feet were dressed by Dr. Sayre before the medical class at Bellevue College (November 1), by supplying force to the paralyzed muscles by means of India-rubber springs (instead of cutting the tendons of the healthy ones), after the method of Mr. Barwell, of London. The first dressing corrected the deformity to within 15°, as long as the elastic force was kept up. Nov. 2, child restless during the latter part of the night; removed the hard bandages, and applied soft ones; straightened the folds in the adhesive plaster, and reapplied the rubber. Nov. 4, patient now bears the dressings without complaint. Nov. 9, dressing reapplied; deformity less than one-half of what existed at the commencement of the treatment. This case continued to improve up to December 15, when the deformity amounted to about 15°, with all dressings removed. At this time the mother removed to the country, and the case was lost sight of until the 4th inst., when she returned to the Dispensary for treatment, the deformity hav-

Fig. 18.

ing slightly increased during the interval. No photograph has yet been obtained of the case in its present condition.

CASE VI. *Congenital Varus of Right Foot, and Varo-calcaneus of Left Foot, cured by Elastic Tubing.*—John F. Calhoun, 432 2d Avenue, aged 6 months (Fig. 19), was brought to the out-door department of Bellevue Hospital, November 7, 1867. Parents healthy; no other children. Treatment same as Case V. The right foot was dressed Nov. 11, the foot being quite easily brought round and retained in the straight position. Nov. 15, dressings have given no pain or uneasiness to the child. Reapplied by Dr. Sayre.

Fig. 19.

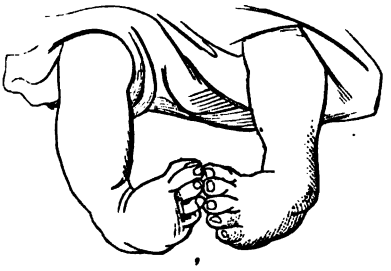


Fig. 20.

20*th.* Deformity of right foot about one-half; dressings applied to left foot to-day, which is retained in position by a very small amount of elastic force.

The dressings were reapplied about once a week, until January 2, when they were removed, the feet being nearly in the normal position, being easily retained in a straight position by a common pair of laced boots. The India rubber will be reapplied as soon as the child commences to walk, if necessary.

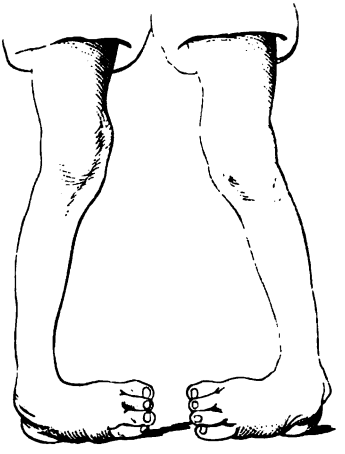
The photograph, Fig. 20, showing the improvement, was taken April 8, 1868.

The following case was sent to me by Dr. Benjamin Lee, of Philadelphia, to add to my report, as illustrating the success of the treatment without tenotomy. Upon carefully reading it, however, I find that he used sufficient force, on several occasions, while the child was under chloroform, to *break* the contracted tissues, as he says: "These manipulations were made with all the force I was capable of exerting, and were occasionally accompanied by the audible rupture of ligamentous or fascial fibres. They were repeated every third day for three weeks."

This is one of the few cases to which I have referred in which the knife is justifiable. It remains, however, for further experience to determine whether, even in these cases, rupture by force, or the knife is preferable. This point I am at present not able to decide, having hitherto, in all such cases, used the knife.

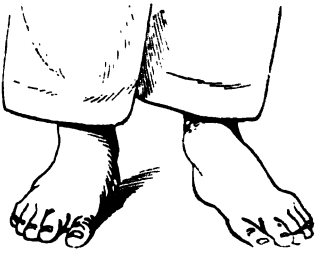
CASE VII. *Double Congenital Equino-Varus, in a Boy ten years old, successfully treated without Tenotomy, after Seven Years of Complete Relapse.* By BENJAMIN LEE, M.D., of Philadelphia.—Edwin Barto, of Pine Grove, Schuylkill Co., Pa., æt. nearly ten years, came under my care September 23d, 1867. He was born with talipes equino-varus, of a severe grade, affecting both legs nearly equally. At the age of two years he was successfully operated upon by Dr. Woddrop, a surgeon of some reputation as a tenotomist in that part of the State, the Achilles tendon, and tendons of the anterior and

Fig. 21.



Edwin Barto, October 15, 1867.

Fig. 22.



Edwin Barto, May 1, 1868.

posterior tibial muscles being divided in both legs. Scarpa's shoe was then applied and worn for six months. At the end of this time the appearance of the feet was almost natural; but the toes still pointed inwards somewhat. By the advice of the physician, the instruments were now removed, and a shoe made under his direction was substituted. A relapse immediately commenced, and in the course of a year the deformity was as great as ever.

He was brought to me just seven years after the removal of his instruments. The condition of his feet was then by no means

encouraging for the success of a purely mechanical treatment without tenotomy. The feet were at right angles to the legs. He had been walking now for fully six years upon the dorsum of the foot, as attested by the large and thick bursal cushion, covered with horny integument upon its outer side. The head of the astragalus and anterior extremity of the os calcis formed large protuberances upon the outer and upper dorsal surfaces. The rigidity of all the articulations of the foot was considerable. Strong pressure with the hand moved the toes through an arc of about thirty degrees. The muscles below the knee were also greatly atrophied. The tendo-Achillis was strongly reunited and firmly contracted. All the muscles, however, responded to the exercise of volition, and there was slight voluntary flexion and extension of the foot through the mid-tarsal articulation.

I commenced the treatment of the case by placing the patient under the influence of chloroform, and forcibly manipulating the feet in the direction contrary to the deformity. After each manipulation, gutta-percha splints, moulded to the feet before the operation, were applied, as advised by Mr. Barwell. These manipulations were made with all the force that I was capable of exerting, and were occasionally accompanied by the audible rupture of ligamentous or fascial fibres; they were repeated every third day for three weeks.

On the ninth day I applied Barwell's adhesive plaster and rubber spring to the right, and on the eleventh day to the left foot, substituting for his wire loop attached to the foot plaster, a piece of soft, stout webbing passing under the foot and stitched to the plaster, and fastened to the lower end of the spring by means of a buckle. The deformity was so unyielding, however, that a sufficient amount of force to affect it uniformly displaced the plaster. I therefore devised a leather sandal, having a stout tin sole, and lacing over the top of the foot. The sole was adapted carefully to the sole of the foot, passing from the toes to the oblique *sulcus* at the junction of the middle with the posterior third. A webbing strap was riveted to the sole of this sandal in the same position as that occupied previously by the adhesive strap on the sole of the foot, and this fastened as before to the buckle at the end of the spring.

This arrangement worked admirably. The sandal being tightly laced, the foot was held firmly—not slipping round—and obeyed the action of the force exerted on the webbing.

Considerable difficulty was experienced, however, in guiding

this force in the right direction, for the point of attachment being near the knee, the spring was liable to advance beyond the centre of equilibrium of the articulation through which the restorative motion was taking place, and thus defeat its own object. This, coupled with the fact that the patient would soon return to his home and pass from under my immediate personal supervision (which was of course essential to the proper following out of that mode of treatment), led me to substitute something more sure and less difficult of adjustment in its place. I accordingly had a pair of instruments made on the plan of Mr. Adams' "instrument for adult varus," having the fulcrum just above the external malleolus, and acting by a series of cogwheels as nearly as possible in the direction of the paralyzed muscles, thus *drawing*, not *pushing*, the foot into its natural position, and acting separately upon the equine and varous distortions. These I applied at the end of six weeks from the time of the commencement of the treatment. The rigidity of the articulations had already yielded in a marked degree. Although the manipulations under the influence of an anæsthetic were discontinued after the end of the third week, passive motion was made use of daily with such amount of force as the patient could bear without serious pain, and this constituted a most important element of the treatment. The arc of enforced motion of the toes was by this time certainly double what it was at first. I directed the patient's father to continue to make use of the horizontal movements of the instruments until the varus was completely overcome, only using the vertical to insure complete adaptation of the sole plate.

In one point my instruments differed from Mr. Adams', if I correctly apprehend his description. I made the sole plate movable upon the rod which carries it, and thus self-adjustable to the obliquity of the sole, while from the earnestness with which he insists on the necessity for making the sole piece oblique, I conclude that in his it is fixed.

I also instructed the father in the proper mode of making the forcible manipulations, and ordered them to be used daily for half an hour.

The instruments were applied the 6th of November, and the patient went immediately out of town. *One week* later I received a letter from his father, saying that after the first night the boy had complained but very little of pain, but that there was a degree of tenderness about the right foot which precluded the use of the passive exercise. Both feet had already become much more plia-

ble. *Six weeks* from this time the lateral distortion was entirely overcome, and the heel was beginning to come down. The protrusions of the astragalus and calcaneus had entirely disappeared. The tenderness of the right foot still continued, with a slight disposition to swell, but the projecting bones returned to their normal position on this foot first, indicating that he probably made use of more force on this, than on the other, without being aware of it. The patient could now produce perceptible motion through the ankle-joint himself. I ordered cold affusions to the tender foot, with the effect of entire and speedy relief. By the end of another month, the equinus was so far relieved, that the foot maintained itself at right angles to the leg, without the employment of the least force, and he could put on an ordinary shoe and walk with considerable ease. At the present date, April 28, the appearance of his feet is perfectly natural, not the slightest tendency to varus remaining; on the contrary, the left foot exhibits a slight yielding in the opposite direction, owing, as I surmise, to an imperfect union of the tendon of the tibialis posticus divided in infancy. The volume of the muscles of the leg, although still lamentably small, is beginning to increase, and the temperature of the limbs is uniformly good.

The accompanying photographs indicate the condition of the feet before treatment and at the present time. I consider that the case is entitled to notice, as showing what may be accomplished, in a comparatively short space of time, by the judicious employment of mechanical contrivances without the use of the knife, even in severe cases of this deformity, for I think that no one will venture to claim that a case relapsed and walked on for nearly seven years is any more amenable to treatment than one which has never been operated upon. Certainly the advocates of invariable tenotomy do not think so, as they operate over and over again if the deformity returns. Cases are on record where the operation has been repeated at least as many as eight times, and still recovery has not been insured.

1503 SPRUCE STREET, PHILADELPHIA, April 29, 1868.

Since writing this report I have had several cases of talipes plantaris, and as I have said nothing of this variety of club-foot in the paper, and as almost all authors have mistaken it for talipes equinus and have recommended the division of the tendo Achillis

for its relief, which does no good, but only adds to the infirmity, I have thought it would add to the value of this paper by describing two of the cases, and adding a few brief remarks upon the treatment of this deformity.

This deformity is not dependent upon an abnormal contraction of the gastrocnemius and soleus muscles, as was formerly supposed, but is caused by a want of power in the flexor muscles of the foot, and it often happens that the only muscles acting as flexors of the foot will be the extensor of the great toe, and in its efforts will frequently produce partial luxation upwards of the metatarso-phalangeal junction of the great toe.

If you take the deformed foot in your hands, you can in the majority of cases easily bring down the heel to a right angle with the leg, and you will then see that the deformity depends upon the dropping of the foot in front of the medio-tarsal joint. And the object to be accomplished is to elevate this portion of the foot by applying some force that will take the place of the partially paralyzed muscles, and not to divide the tendo Achillis, which would only have the effect of dropping the heel to match the deformed foot in front, by making it like an inverted U.

My recently improved shoe with an orbicular joint opposite the medio-tarsal articulation, or with a hinge joint working up and down in the sole at the same place with an elastic force in front to act as an elevator, is the best contrivance for this variety of deformity. These cases may frequently require subcutaneous section of the plantar fascia, and possibly of the short flexors in the hollow of the foot. Should section be necessary, the wound should be immediately closed with adhesive plaster and a roller. A board cut from a cigar box or any similar material to fit the bottom of the foot is then cushioned under the heel and base of the toes, and secured by a very firmly applied roller, pressure being made on the instep in order to expand the foot with as much force as each particular case will indicate or justify. In a very few days the wound will heal without suppuration, when the foot should be firmly handled and bent in the opposite direction from the deformity with as much force as possible. And this plan must be persisted in with energy every few days. In some cases, if the pain is very great, it may be advisable to use chloroform for a few times when the force is applied.

The shoe which I have before described should then be put on, and the child encouraged to run around as much as possible.

Electricity should be applied to the muscles on the anterior part of the leg every second day, and friction, shampooing, and nipping manipulations over the undeveloped muscles every day.

By this procedure I have within a very few weeks restored to almost perfect symmetry and use feet that were hideously deformed and almost useless, and which had been cut in various tendons three and in one instance four times by different surgeons, and had been under treatment with different kinds of shoes from birth.

The following case, brought to my office 27th May by Mr. Ford, surgical instrument maker, 85 Fulton Street, illustrates my views so well that I have added it to this report.

CASE VIII.—S. S., Brooklyn, aged 7, was born with double club-foot, according to the mother's statement; was operated on when three months old by a surgeon in this city, who cut the tendo Achillis of both sides; a few months after the tendons of both anterior tibials were cut, and about two years since the tendo Achillis was cut again. Shoes of different kinds had been worn all the time, and at last the surgeon had abandoned the case to Mr. Ford, the instrument maker, who brought the child to me.

The feet at the time were secured in shoes with a firm steel sole, and, although they had joints in the rods running up the legs opposite the ankles, which were acted upon by screws, and intended to elevate the feet, still, as they were only moved when the assistant applied force to the screw, and then fixed in the position obtained, the muscles of the leg, even the normal ones from being so long in a passive condition, had become atrophied; and his legs from the ankle to the knee were more like two straight sticks of nearly equal size at top and bottom, than like an ordinary leg with well developed muscles.

When the shoes were well adjusted, he could walk by the aid of canes, on the outer corner of the little toes, for a little distance, the feet cropping over each other, and the pain so great that in a few minutes he would give up his exercise, and could not again be induced to walk until the shoes had been removed, and the feet had some rest.

When he attempted to walk without the shoes, his feet dropped and were inverted, so that he walked upon the outer part of the foot, where there was an extensive callus. (See Fig. 23.)

On the 27th May, 1868, Dr. L. M. Yale put the child under

chloroform, when I found that by moderate force I could bring the left foot into nearly a natural position.

On the right side, the heel could be brought down to a natural position, but it was impossible to elevate the foot, or rotate it outwards; in fact the whole anterior part of the foot seemed like a solid plaster cast, with no motion at any of the joints except the toes.

I therefore made a free subcutaneous section of all the resisting structures in the hollow of the foot, closed the wounds with plaster and a roller, and immediately bent the foot almost straight. It was secured in this position by a board under the foot, and a roller as indicated above.

Fig. 23.

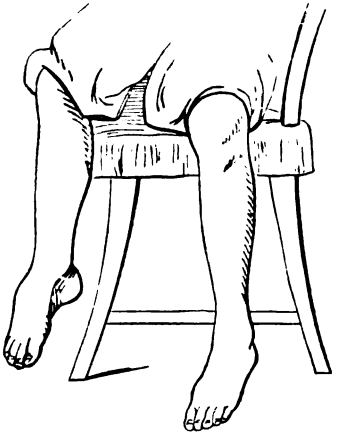


Fig. 24.

I directed Mr. Ford to make a pair of shoes, with orbicular joints in the soles, and elastic rubber to elevate and rotate outward as I have already described, and to return with the child when the shoes were completed.

He returned on the 10th of June, thirteen days after the operation. The wounds had partly healed without any suppuration, and the child had suffered very little pain from the operation. The bandage had been removed once or twice by my assistant, and the foot well washed and rubbed.

Mr. Ford had constructed the shoes remarkably well, from the model I had given him. They were put upon the child, and fulfilled all the indications desired most admirably. The rubber was hooked on with only a very moderate force at first, but was gradually increased a link at a time for an hour or more.

At the end of about three hours his feet were in a perfectly

natural position, and he could walk without a cane with his heels upon the ground, and his feet parallel with each other.

He walked to the photograph gallery without assistance, and had his picture taken (see Fig. 24) just thirteen days from the operation.

Electricity was applied to the anterior portion of the leg and foot every other day, and very free handling and motion made to all the joints of both feet.

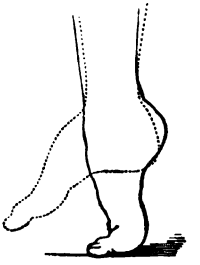
June 20, 1868. He can flex his feet slightly without the aid of the rubber; his feet are much warmer, more natural in color, and the legs have increased around the calf nearly three-quarters of an inch in circumference.

CASE IX.—H. F., Hudson, N. Y. A girl four years of age was sent to me to divide the tendo Achillis for club-foot of the right side. The history of the case as given by the mother was, that the child presented as a "cross birth," and was delivered by the doctor by turning; and the deformed foot was the one seized by the doctor in the delivery; and in the opinion of the physician who delivered her, the foot was injured at the birth.

When the child was old enough to walk, this foot was found to drop in front, the ankle was stiff, "and the heel seemed to be pinned to the back of the leg." Dr. "Taylor's Swedish movement cure" was tried for two years, but with no result beyond making the ankle more flexible.

When the foot is permitted to hang in its natural position, there is a remarkable protuberance of the scaphoid bone, as seen in Fig. 26, which was traced from her leg. By taking hold of the foot, however, and with a very slight force the tendo Achillis could be stretched, and the heel easily brought down to its natural position, at a right angle with the leg, as seen in the dotted lines. But the foot in front of the medio-tarsal articulation, would still remain drooped, as seen in Fig. 25, and could not be elevated.

Fig. 25.



In my note-book I find the following entry, made at the time of my first examination, by my assistant, Dr. Yale: "It is quite possible that the plantar fascia and short flexors of the foot will require division, but shall at first attempt to accomplish the restoration of the foot by manipulation, and shoe with elastic extension." The result of the treatment proved the wisdom of this decision.

I put her under chloroform, and by very firm pressure and extension continued for some time, I found that I could make a very decided diminution of the arch in the hollow of the foot, and very materially increase its length; and as I never cut tissues that will stretch under a moderate degree of force, I resolved to use the shoe, without resorting to tenotomy.

The foot was handled with great freedom every day while the shoe was being made, and stretched as much as the child could bear without suffering much pain; and electricity was applied to the anterior muscles of the leg every other day.

On the 24th June, the photograph of Fig. 26 was taken, and then an ordinary shoe with steel supports on either side jointed

Fig. 26.

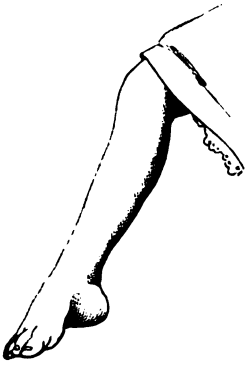


Fig. 27.

Talipes Plantaris Paralysis.

opposite the ankle, and buckled around the leg above the calf to give attachment to an elastic rubber which ran from a stirrup over the ball of the toes, for the purpose of elevating the foot, was applied, and the photograph of Fig. 27 was taken about one hour afterwards. With this shoe on, and the rubber properly adjusted, she runs with perfect freedom, and without the slightest limp.

A NEW METHOD

OF

RECONSTRUCTING THE LOWER LIP AFTER ITS REMOVAL FOR DISEASE:

ILLUSTRATED BY TWO CASES OF EPITHELIOMA.

BY

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A NEW METHOD OF RECONSTRUCTING THE LOWER LIP AFTER ITS REMOVAL FOR DISEASE, ILLUSTRATED BY TWO CASES OF EPITHELIOMA.

Mr. C. W., resident of Bridgeport, Connecticut, ætat. 47 years, of fair complexion and spare habit, first noticed, about two and a half years ago, a small spot on the margin of the lower lip near its centre, that became covered with a thin scab, that detached itself and was succeeded by another. At a later period he noticed a subjacent hardness. One year and a half after its appearance he became concerned about it and showed it to his physician, who advised its removal by a V incision. The patient, averse to so extensive a mutilation, urged its being sliced off, and then freely cauterized. To this alternative his physician reluctantly assented, but not without protest. He operated in August, 1866. The wound did not entirely heal. This failure after the use of the knife, and the importunate solicitation of friends determined Mr. W. to put himself under the treatment of N——n, of New York City, and subsequently of O——t, of Port Chester, New York, notorious cancer quacks. Successive applications of escharotics were made to the sore; the last about four weeks ago; the effect of which was to cause it to spread in every direction.

Its present condition (August 25, 1867) is as follows: The lower lip is destroyed except half an inch of border at each angle of the mouth, which is still sound and of healthy aspect. The space between what remains of the lip is occupied by an ulcerated surface that extends downward to the commencing swell of the chin. The margins of the ulcer are uneven, swollen, red, and firm, and tender on pressure. The surface of the sore, consisting of periosteum, is swollen and of a dirty grayish aspect. Near the centre of this surface a probe encounters subjacent rough bone. The ulceration also extends over the alveolar border of the jaw from which all the incisor teeth have dropped out. The frænum linguæ is swollen at its base and involved in the ulceration. The canine teeth on either

side are loose, ready to drop out, and discolored; the discoloration affects also the alveolar sockets of the incisors. A constant flow of saliva is a source of the greatest discomfort. No glandular enlargements are to be felt below the jaw.

The patient wears an artificial covering that conceals the sore and imitates the appearance of the lower lip; his general health has not suffered apparently.

Fig. I. represents the extent of the disease.

Operation.—At 1 o'clock P. M. the following operation was performed at Mr. W.'s lodgings, on Fourth Avenue, with the aid of Prof. A. C. Post, Dr. Robert F. Weir, and others.

Mr. A. L. Northrop, a skilful dentist, of No. 10 West Eleventh Street, was also present to render his professional services.

Patient having been fully etherized, Mr. N. extracted several teeth, including the lower canines. Reference was had, in so doing, to the adaptation subsequently of an artificial plate of vulcanite to supply the front teeth, and support the new lip about to be constructed. A vertical incision, commencing on either side at the labial border, near the angle of the mouth, was carried downward along the margin of the ulcer, far enough, however, from it, to pass through sound skin. In their descent these incisions curved outward before converging to meet at an angle far below the chin. (See Fig. I. A to B, A to C.) The entire diseased surface was thus included in a triangular patch, which was dissected up from the periosteum. Lüer's gouge shaped bone forceps was then used to gnaw away the alveolar border of the jaw, so as to include the sockets of all the incisor and canine teeth. The anterior surface of the jaw, where the escharotics had divided the bone, was also gnawed away. To supply the removed parts, and reconstruct the lip, the following method was adopted: after dividing the buccal mucous membrane along the line where it quits the lower jaw and coats the cheek, as far back as beyond the last molar tooth, all the superjacent coverings were dissected up from the periosteum, and the detachment was continued on the same level below the edge of the jaw. This permitted the edges of the wound to be approximated in the median line and secured in apposition without any strain upon the sutures. Three pin sutures, wound with yarn, and intermediate interrupted sutures were employed for this purpose. The scanty lower lip, thus readjusted, was less than an inch in length, while the upper lip was doubled upon itself, and stood out very prominent, as shown in Fig. II. In order to increase the length of

the lower lip, a portion of the vermilion on the border of the upper lip adjacent to the angle of the mouth on both sides was transposed in the following manner.

With strong scissors the upper lip and cheek were divided in their entire thickness at three-fourths of an inch from the angle of the mouth, in a direction upward and outward to a distance of one inch and a half. (See Fig. II. A to B.) The border of that portion of the upper lip connected on either side with the angle of the mouth, was then detached by a section running half an inch distant from the vermilion margin and extending to a point at the same distance below the angle, as in Fig. II. C to D. From the last point of termination a horizontal incision through the entire thickness of the cheek was carried outward far enough to make room to allow the strip of lip-border just detached to be laid down on a line continuous with the lower lip, Fig. II. D to E. From the end of this last incision, another incision was carried upward and a little forward to the termination of the first incision through the upper lip, Fig. II. E to B. The triangular patch included with its apex above was removed, Fig. III. A B C. The strip of lip-border (Fig. III. D), was now brought down and stitched in place along the line B C. The triangular space was closed by approximating the edges of the wound forming the apex of the triangle, and securing them in apposition by one pin suture below, and interrupted sutures closely inserted above. The upper lip that in this case was of ample dimensions, had thus supplied the deficiency of the lower lip, new angles had been formed for the mouth, and a well-shaped symmetrical mouth of sufficient dimensions was the result, Fig. IV. The adhesive plaster was used. Nearly three hours were occupied in the operation, frequent interruptions being necessary to maintain the effect of the ether. Though the loss of blood was considerable, the patient's strength was not much depressed, nor his pulse much reduced. Tepid water-dressings were directed to the face, and stimulants and beef-tea ordered to be administered. Without detailing the daily progress of the case after the operation, it will be sufficient to state that the subsequent constitutional reaction was moderate, and the inflammatory swelling of the parts at no time excessive. Union by first intention took place throughout every part of the wound. The only point at which there was any suppuration was at the angle of the wound under the chin, and that was inconsiderable. The yarn was changed upon the suture pins daily to relieve the constriction that

otherwise might have caused ulceration. The alternate thread sutures were removed after the second day, and the remainder as well as the pin sutures were removed in succession daily as they could be safely dispensed with. At the expiration of six days all the sutures had been removed and the patient was able to ride out.

Early in the month of November following, Mr. W. presented himself for further advice. In the middle of the most prominent part of the chin the skin was red, swollen, and hard; under the tongue and behind the symphysis there was a hard lump, of the size of a chestnut, firmly adherent to the bone. The surrounding parts were in all respects apparently sound, and his general health was good. This early manifestation of a return of the disease seemed to indicate that some germs of it had been left behind at the root of the frænum linguæ. The entire lower lip, to the extent of a finger's breadth below the vermilion border, being sound, it was thought practicable to remove all the diseased parts without involving the lower lip. In carrying out the plan, however, the front portion of the jaw would have to be removed. There being no other alternative, but leaving the disease to pursue its ravages unchecked, the patient decided to submit to another operation.

Second Operation.—On the 7th November the following operation was performed, after the administration of ether: A transverse incision was made across the chin, at a finger's breadth below the vermilion border of the lip, from opposite one canine tooth to the other. From the ends of this incision two others were directed downwards, converging toward each other, and meeting at an angle in the median line upon the upper part of the neck. Within the triangular space thus inclosed, were contained all the parts that required to be removed. The bone on either side was exposed, and a track opened around it in the situation of the canine tooth, for the passage of the chain saw with which the jaw was divided. The included fragment, with the tumor attached, was then removed. In doing this, the muscles inserted into the symphysis were necessarily divided, and the anterior support of the tongue removed. At this moment respiration became obstructed, and symptoms of asphyxia showed themselves. No time was lost in passing a needle armed with a coarse thread through the tongue with which a loop was formed to hold it forward, and relieve the entrance of the larynx. After securing the bleeding arteries, the transverse incision was extended further outward at both extremities, and the

lateral edges of the triangular space dissected up so as to facilitate their approximation in the median line. In the absence of the projecting portion of the jaw, this was readily accomplished, and the exact coaptation of the edges secured by three pin sutures, wound with yarn, and numerous interrupted thread sutures closely inserted. Before closing the wound, the fresh cut ends of the jaw were perforated, a silver wire was then passed transversely through the under surface of the tongue near its extremity, and its ends brought out through the perforated bone and secured; as an additional precaution the looped ligature was left in the tongue, and moderate traction kept up upon it for the first few hours after the operation.

The patient's progress after this second operation, as after the first, was very favorable. Union by first intention took place throughout almost the entire wound. On the fifth day the silver wire securing the tongue was removed, all the other sutures having already been removed in succession. On the tenth day, the patient was able to leave the city, accompanied by his wife, to make a visit to a relation's house in the country.

April 16th, 1868. Patient presented himself for examination. A luxuriant growth of beard concealed the scars and disfigurement of the face. Articulation was scarcely at all impaired. The tongue could be protruded an inch beyond the lips. The saliva was controlled within the mouth. The two sides of the jaw had come into contact at their cut extremities, and were immovably consolidated. This necessarily prevented mastication, as the upper and lower teeth no longer confronted each other. He could no longer make use of solid food unless it had been previously reduced very fine. During the preceding winter his general health had suffered considerably from deranged digestion consequent upon the privation of mastication. He had, however, of late become accustomed to the change of diet, and had discovered how best to manage his food. All the parts bordering on the former seat of disease were free from induration, and to all appearance sound. Fig. V. shows the result.

CASE II.—Henry Folk, native of Germany, æt. 67 years, admitted into New York Hospital, Ward IX., South House, July 9th, 1867. It will be sufficient for our purpose to state that the lower lip was invaded by well-characterized epithelioma to an extent requiring, for its extirpation, the removal of all its free border, except about half an inch at each angle of the mouth. The disease had existed

about eighteen months. There were no glandular enlargements in the vicinity, and the patient's general health was good.

Operation was performed July 12th under the influence of sulphuric ether. In this case the operation differed from that performed in Case I. in the removal of the diseased parts by including them in a quadrilateral instead of a triangular patch. After this was done the transverse incision crossing the upper margin of the chin was extended outward at each extremity toward the cheek. The flaps thus formed were dissected up from the periosteum, and the buccal mucous membrane was divided on the line where it quits the jaw to cover the inside of the cheek as far back as the last molar tooth. This permitted the edges of the lateral flaps to be approximated in the median line and secured in exact apposition without any strain upon the sutures. Three pin sutures wound with yarn and intermediate fine thread sutures were used for the purpose. The edges of the remaining transverse portion of the wound were adjusted with fine interrupted sutures inserted close together. This was all that was attempted in this operation. The lengthening of the lower lip was reserved for a subsequent operation. In this respect also the operation in this case differed from that in Case I.

Patient did well after the operation. The treatment was the same as in the first case. Union by first intention took place throughout the entire wound. On the sixth day all the sutures had been removed.

Fig. II. shows the result. The lower lip is scarcely one inch in length; the upper is doubled upon itself, and stands out very prominent.

Second Operation.—On the 23d July, eleven days after the first operation, a second operation was performed for the purpose of lengthening the lower lip at both angles of the mouth. This was done by the same procedure as was employed in Case I., a description of it therefore need not be repeated. Patient's progress after this second operation was not as favorable as after the first. Union by first intention took place only to a very limited extent. The edges of the wound became sloughy and the greatest care was necessary to maintain them in apposition while appropriate applications were made to restore a healthy action and promote healing by granulation. By means of strips of adhesive plaster carefully applied and sutures introduced at certain points, and also by vivify-

ing the edges and securing them in contact with sutures, union was at length obtained throughout the entire wound.

The cautious application of nitric acid to the sloughy parts after thorough cleansing with salt and water, and the administration of tonics, stimulants, and nutritious food, were the means which, after long perseverance, finally secured the desired result. On the 30th August, patient was discharged cured. Though the result obtained is less perfect than it would have been had primary union been secured, the new mouth is of sufficient dimensions and symmetrical in shape. Fig. VI. shows the final result.

REMARKS.—The principle of supplying a deficiency of the lip-border by a transfer of an adjacent portion is not claimed to be new. The cases within the knowledge of the author to which it has been applied are found in the *Œstreich. Zeitschrift für Practisch. Heilkunde*, Vienna, March 13, 1857. Two of the cases there reported were operated on by Langenbeck, and one by Sedillot. In all of them adjacent lip-border was detached and slid forward to fill up a neighboring deficiency. Reflecting upon these cases, and considering in what way other applications of the principle might be made, the author was led to devise the method illustrated in this paper by the two cases just narrated.

These cases, it will be observed, occurred in the inverse order in which they are reported. The experience furnished by Case II. (the first in order of occurrence), in which two separate operations were performed to attain the final result, determined the author to carry out in Case I. the whole procedure in a single operation, and also to vary the method so as to include the diseased parts requiring removal in a triangular instead of a quadrilateral patch. The unfavorable progress after the second operation in Case II., and the failure to heal by primary union, may fairly be attributed to the patient's deteriorated condition, produced partly by the depressing effects of the first operation, and partly by the adverse conditions incident to a protracted confinement within the walls of a hospital. Though a greater local injury is inflicted by completing the whole procedure in a single operation, and consequently a greater task imposed on the reparative forces of the system, the task would seem to be better sustained in a single effort, than when it is attempted to lighten the task by dividing it into two.

It is besides no unimportant advantage to spare the patient the

anticipation of a second operation, which is never without a depressing influence upon the spirits. The advantage of the triangular over the quadrilateral method of removing the diseased parts is, that the linear cicatrix in the median line resulting from the former method is much less conspicuous and consequently less disfiguring than the transverse cicatrix crossing the chin and cheeks, resulting from the latter.

Where the front teeth of the lower jaw are wanting, it is an advantage to have an artificial fixture of vulcanite adapted to supply the place of the teeth, and afford support to the new lip.

The adaptation of this fixture falls within the province of a dentist, and it should be fitted before the operation, and put in use early after the parts have healed. Compared with other established methods of reconstructing the lower lip in which flaps are taken from the adjacent cheeks, our method may claim the important advantage of affording a better shaped lip, and one that retains its natural action by virtue of the fibres of the orbicular muscle preserved in the transferred lip-border.

Fig. I.

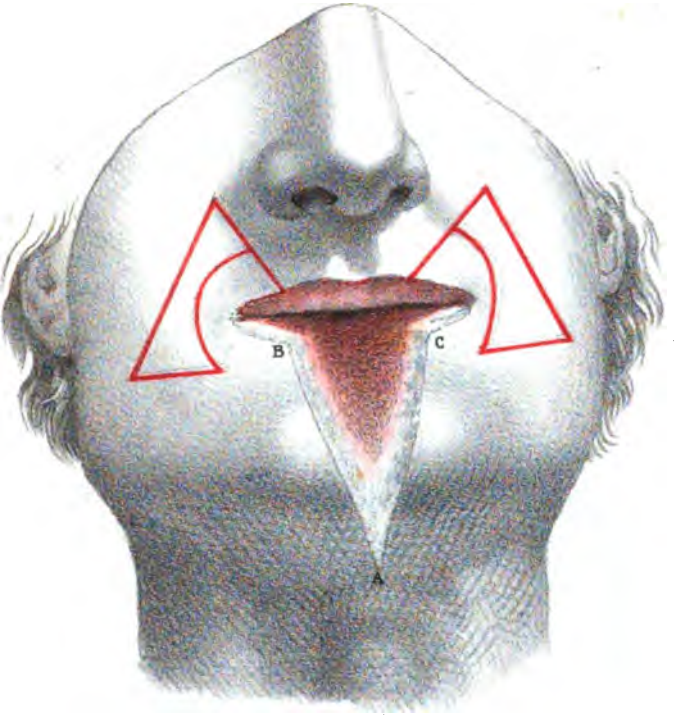

Fig II.

Fig. II.

Fig. III.

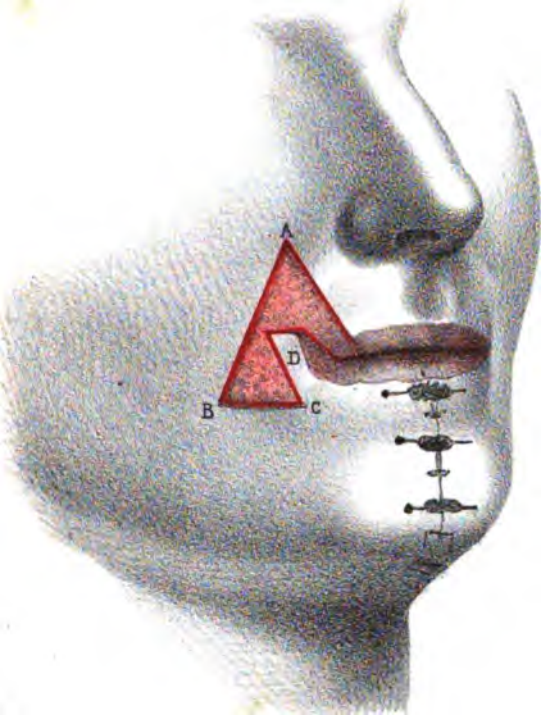

Fig. IV.

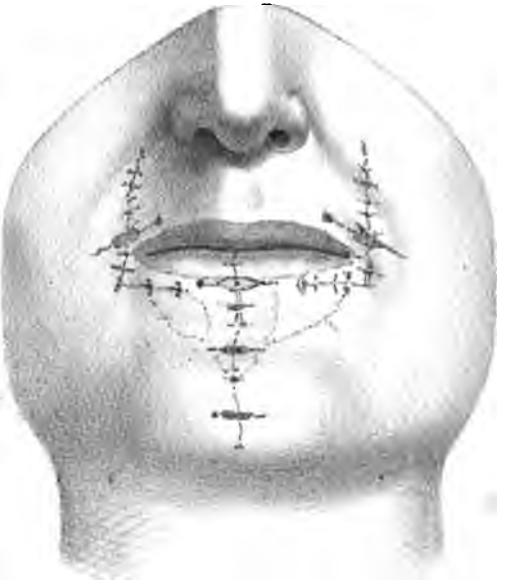

Fig V.

A NEW MODE

OF

TREATMENT OF CONGENITAL TALIPES.

BY

ISAAC N. QUIMBY, M. D.
OF NEW JERSEY.

A NEW TREATMENT OF CONGENITAL TALIPES.

I WOULD be pleased to present to the American Medical Association a very hasty and rather imperfect sketch of a new and original method of treating "Talipes Varus" without the division of any tendons, together with the history of two or three cases, treated and cured by this process, which will be described in the following cases:—

CASE I.—I was called to attend Mrs. Q., December 5, 1864, who gave birth to a child with "talipes varus" of the most aggravated form, in both feet; and I resolved to try a method of treatment which I had had in contemplation for some time, viz., the stretching process by means of adhesive strips. So, as a preliminary step, a few days after birth I ordered the nurse to wash and rub the child's feet and legs twice a day for two weeks, with a lotion composed of two parts of water to one of alcohol, and adding to a pint of this solution one drachm of alum. After this hardening process had been continued for two weeks, I then applied the adhesive strips in the following manner: I used three pieces, one being cut so as to fit and cover the entire sole of the foot. This being applied, the second piece is cut in the form of a parallelogram an inch and a half wide, and long enough to extend from the hollow of the foot to the knee, on the end of which piece there is an expansion of three inches, which forms an angle of eighty or ninety degrees, so as to extend from the plantar surface of the toes to the hollow of the foot, the foot being held in a proper position by an assistant. The third piece is cut of sufficient width to extend from the hollow of the foot to the heel, and extending up the leg to the same height as the other. A roller bandage is then applied, commencing at the toes and extending up to the knees, serving to keep the plasters adherent to the limb. During the first two weeks of the treatment the bandages were changed every

day, and plasters twice a week—at the same time very thorough passive motion was made. During the third week the bandages were changed every other day, and the plasters only once, and in the fourth week the bandages were changed twice a week, and the plasters whenever they became displaced. This manner of treatment was kept up for two or three weeks, whenever the improvement was so great that I found it unnecessary to remove the bandages and plasters except as they became displaced. The treatment was continued for three and a half months, since which time she has worn nothing but a common shoe, and her feet are perfectly restored, there being not even the turning in of the toes, which is so common with children who have suffered from this deformity.

CASE II.—June 15, 1867, Mrs. M. brought me her babe, between three and four months old, with a very marked and obstinate type of "talipes varus" of the right foot. My first impression was, after careful examination of the case, that I should divide the tendon Achilles and the plantar facia, and so informed the mother, and directed her to return the following day for that purpose. But in contemplating the yielding tendency of the human frame under constant application, especially in early life, and the gratifying result of my former case, I determined to try the stretching process with adhesive plaster in this case, although it had advanced beyond the period most *apropos* for its use, viz., at or soon after birth. Notwithstanding the advanced age of the child, I commenced to use the plaster very much as I did in the former case, and am happy to say, that after about five months' application, and thorough passive motion, the foot was almost wholly restored without any diminution in its size or development. This treatment has been kept up mostly by the mother, and partly by myself, until the present time, and now the child (being thirteen months old) commences to walk, using one foot as well as the other. This is the end of the treatment, for as soon as you can get the child to stand squarely on the sole of its foot, nature (and the weight of the child) will complete the cure without any aid from science. I would like to call especially the attention of this Association to this case on account of its aggravated type, the advanced age of the child before the treatment was commenced, its perfect restoration, and the space of time occupied in its cure—showing clearly, that if it can be accomplished in a child of three or four months old, it

can, without contradiction, be accomplished in a child when the treatment is commenced two or three weeks after birth.

CASE III.—Mrs. H. gave birth, April 25, to a child with "talipes varus" in left foot of ordinary type, and on the fifth day after birth I applied the plasters, and found but little difficulty in bringing the foot into its normal position. Of course I have not had the time yet, in this recent case, to know positively what the end will be, but have not the least doubt, in my own mind, but that I shall have perfect restoration of the foot in the short space of from three to six months. I was led to try this experiment from observing, that after operating on weak and scrofulous children after complete restoration of the feet, there is most always weakness of the ankle-joint, together with partial atrophy of the limb, following the operation—and the same result may be found in healthy children—a defect which they will carry with them through life, and which I think is attributable somewhat, or perhaps altogether, to the delay in the treatment, to the division of the tendon and the plantar facia, and to the confinement which is necessary to keep the foot in its proper position. The necessary pressure has a tendency to impede circulation and retard development of the limb, which must be avoided if we would restore the proper function of the foot. One of my own children was also born with "talipes varus" in both feet, and not being pleased with the idea of waiting six months or a year—which is the custom of most surgeons—before anything was done for the deformity, and then using the knife, was to me rather unsatisfactory. I thought there should be some more philosophical way of meeting this difficulty; so, after using various means, I at last found it in adhesive strips, to my gratification. I would like to call the attention of the medical profession to a few important points regarding this method of treatment.

1. That the assertion is erroneous, made by many eminent writers on orthopædic surgery, that if the deformity is due to muscular contraction, it cannot be cured without tenotomy.

2. The rule, as is practised at the present day, of waiting from three to six months, or a year, before treatment is commenced, thereby allowing the tendons and ligaments to become more firm and unyielding, and the deformity more marked, is a waste of the most valuable time in the patient's life for the cure of this malformation, and may make all the difference between perfect and partial restoration.

3. That the feet can be completely and perfectly restored, however aggravated, when taken at the early period of from three to four weeks after birth.

4. The space of time required for restoration is not so long, and, besides, all the cumbersome shoes, with steel splints, elastic bands, etc., are dispensed with.

5. The utility of this treatment is such that it is not confined to a few expert surgeons, but every medical man, however remote in his rural practice, can use it with benefit to his patient; and if the deformity is, as asserted by some, due to defective innervation or motor paralysis, the adhesive plaster will act in a double capacity by giving mechanical support, and slightly stimulating, by its application, the cutaneous surface of the innervated muscles.

6. Again, it causes less suffering to the little patient, and is not so liable to cause irritation, ulceration, or sloughing of the integument, which is sometimes the case with other methods.

7. During the time of treatment by this method, the foot and limb are very little, if any, confined; and if the deformity is in one foot only, after the plasters and bandages are applied, the mother may have the great satisfaction of dressing one foot the same as the other; or, if both feet are deformed, shoes or socks, adapted to normal feet, may be worn while the child is under treatment, and the deformity be concealed from all obtrusive eyes.

THE

TREATMENT OF SYPHILIS BY HYPODERMIC INJECTION.

BY

L. ELSBERG, M.D.,
OF NEW YORK.

THE TREATMENT OF SYPHILIS BY HYPODERMIC INJECTION.

I DESIRE to call your attention to a subject which has interested me for some time, and which involves, in my opinion, an important contribution to our art. It is the treatment of syphilis by the hypodermic injection of corrosive sublimate. About a year ago a friend informed me by letter that Dr. George Lewin, of Berlin, was experimenting with, and had obtained highly gratifying results from this mode of treatment. My special practice has given me but few opportunities to put it to a practical test, but the success attending its employment in five cases—all of them cases of secondary syphilis—has impressed me with its value, not to say convinced me of its superiority, in producing the specific effect of mercurials in that disease. In urging its claims to your attention I am not now compelled, however, to rely upon my own very limited experience. I have before me the account of its use by Dr. Lewin himself, who has employed it in nearly 900 different cases with satisfactory results. His main experiments have been made during the last two years and a half, in the public Charité Hospital of Berlin. He has detailed from the records of the hospital 500 cases, viz., 189 (61 occurring in males, 128 in females), in which no other treatment was instituted than the hypodermic injections; 74 (37 males and 37 females) in which a diaphoretic course of sarsaparilla preceded the injections; 38 (14 males and 24 females) in which such a course accompanied the injections; 116 (22 males and 94 females) in which, in addition to the injections, iodide of potassium was given internally at the same time; and 83 (10 males and 73 females) in which the injections were combined with the internal administration of chlorate of potassa, some with, some without sarsaparilla previously. The advantages of the method consist in—

1. The rapidity with which syphilitic symptoms disappear. This rapid effect is in direct relation to the largeness of the dose of the

bichloride daily injected. In a series of cases one-eighth of a grain was injected daily; but this amount may be increased. By means of two or three operations in one day, even as much as one-half to three-fourths of a grain may, under certain circumstances, be introduced under the skin. Iritides were cured in from five to seven days. The patient must remain in his room, and avoid all bodily and mental exertion during the hypodermic treatment.

2. The certainty of success. As I have already stated, in nearly 900 cases the method proved satisfactory. Only syphilitic diseases of the bones and of the brain (of the latter, four cases were observed) at all resisted the treatment.

3. Recurrences being relatively rare and not severe. Whereas previously, either with mercurial or non-mercurial modes of treatment, at least about 81 per cent. recurrences took place in about the same time, the subcutaneous method showed, so far, only about 31 per cent.

The brief account here cited I have found in the *Berliner Medizinische Wochenschrift*, No. 13, March 30, 1868 (Notice of G. Lewin, "Ueber Syphilisbehandlung mit Hypodermatischer Sublimat-Injection." *Charité Annalen*, 1868, Bd. XIV., 642 Seiten.)

I have not injected more, usually less, than one-eighth of a grain a day, and this always at one operation, using a solution of five grains of corrosive chloride of mercury to six drachms of distilled water, and accurately measuring the amount to be injected in relation to the whole contents of the syringe employed. Aside from redness and tumefaction locally, which passed off harmlessly, no unpleasant effects followed, except in one patient who occasionally suffered from nausea, pain, and other symptoms of gastric and intestinal irritation. I did not, in any of the five cases, produce ptyalism. I made the injections in various parts of the body without being able to perceive any difference in the effect. The injections should, of course, be made very carefully, and all the known rules and precautions in regard to hypodermic injections generally must be conscientiously observed. I have not found it necessary to continue the injections longer than four weeks at the longest. But I admit that my own cases are too few to draw entirely satisfactory conclusions as to any point; I therefore content myself with simply recommending the subject to your earnest and intelligent consideration.

A SAFE AND EFFECTUAL OPERATION

FOR THE

RADICAL CURE OF VARICOCELE.

BY

PAUL F. EVE, M.D.,
PROF. OF SURGERY IN THE UNIVERSITY OF NASHVILLE.

A SAFE AND EFFECTUAL OPERATION FOR THE RADICAL CURE OF VARICOCELE.

THE hazardous, uncertain and severe operations performed for the permanent relief of threatened atrophy of the testicle from enlarged veins in the cord, viz., the division, incision, and excision of these vessels, ligature to them, injection of the perchloride of iron, compression, caustic paste, strangulation, setons or needles through or under them, even castration, etc., made it desirable that a safer and surer method should be suggested. As is well known, Sir Astley Cooper, the most practical, if not the most distinguished surgeon of Great Britain, proposed, some years since, the removal of a portion of the scrotum for this peculiar affection, confined as it is almost exclusively to the left side, owing chiefly to the difference in the venous circulation of this compared with that of the right. And for this practice there is certainly good reason, since a redundancy in the integuments covering the left testis in varicocele, is as marked and constant, and almost as pathognomonic as the hypertrophic condition of the cord. Indeed, these two pathological changes constitute essentially the disease itself, for without their presence it does not exist. The true philosophical treatment then must necessarily be based upon the removal of these two abnormal conditions in the affected parts, and this is the end and aim of the operation now described.

The patient being etherized, the scrotum over the left testicle previously denuded of hair up to the external abdominal ring, is so secured by the thumb and fingers of the left hand, or still better in Ricord's fenestrated forceps for phymosis, that about four square inches of it is excised by a knife, and without opening the tunica vaginalis. The blades of these forceps should be four inches in length instead of two, as is the case with Ricord's instrument. Before detaching them, *pins* (not needles) are deposited through the integuments near the cut edges, around which the figure of

8 sutures are subsequently applied. Beginning now with these at the most pendent part of the scrotum, and ascending towards the cord, when this is reached, the veins are carefully examined, and if found much enlarged, as they generally will be, they are separated from the vas deferens and spermatic artery, and an *animal* ligature tied around them just sufficiently tight to arrest the circulation. The entire wound is then closed accurately by the twisted suture for union by adhesion. Two weeks are usually asked for of patients, but without some unfavorable occurrence, they are up in a week, and one left for home by railway on the eleventh day after the operation. They are carefully prepared by diet and having the bowels emptied the day before the operation, which is immediately followed by cold water or simple dressings and subsequent free ablutions to the parts. Any inflammatory action is at once checked. As early as the fourth day, some of the pins, numbering from six to a dozen, are withdrawn, and all of them by the fifth or sixth. The ligature to the bundle of veins gives no uneasiness, and has never yet, in my hands, after an experience of thirty five years with it on arteries, occasioned inflammation or secondary hemorrhage referable to it. The ligature may be made of deer sinew, or that of the buffalo; the former is prepared, and is what I use. A difference, too, and a decided one, is made between the pin and needle. The former does not oxidize, the latter invariably does. I have known a common pin to remain eight days under a vein as large as a finger (the internal saphena), and yet be bright when removed. For the same reason lead or silver wire should be employed exclusively in surgery, and steel rejected. I have never resorted to acupressure.

The advantages claimed for this operation are:—

1. The two principal indications for surgical interference at all in varicocele, viz., the removal of redundant scrotum and the destruction of the enlarged veins, are fulfilled by it. By no other yet proposed is this done.

2. By it the parts operated on are fully exposed; you see what is done, and the artery and vas deferens are certainly avoided.

3. It is undoubtedly the most efficient; must produce a radical cure, and though severe, yet is almost painless under ether.

4. It is considered a safe, simple, and certain operation. There is little or no danger from phlebitis, as the veins are not wounded, being only closed, and this by a ligature digested in a few days,

and without producing a solution of continuity in them; and, moreover, the entire wound heals mostly by the first intention.

In the cases operated on this month, April 2d and 17th, one patient was up on the fifth day, and out on the eighth; in the other, the wound around the ligature healed by the first intention, and notwithstanding the very unfavorable weather, he returned home within two weeks.

I have hitherto employed, for varicosed veins of the leg, the twisted suture around pins, letting them remain in some eight or ten days. I now purpose a subcutaneous animal ligature with a roller, and believe that it will effect a cure within a week.

Since the above was written, I find a notice in the late Dr. D. M. Reese's edition of *Samuel Cooper's Surgical Dictionary*, of Prof. Nathan R. Smith, of Baltimore, having excised a portion of the scrotum on Sir Astley Cooper's plan for treating varicocele by a method not very dissimilar to the one here proposed. The coincidence on the part of so distinguished a surgeon, enhances the value of that part of the operation now offered the profession.

Having derived much satisfaction during the past few months in treating four cases of fractured legs as suggested by Dr. James L. Little, and published by him in the last volume of the Association, by the splint made of cotton, flannel, and gypsum, I feel that every contribution, however small, may be productive of some good.

REPORT

ON

AMERICAN MEDICAL NECROLOGY.

BY

CHRISTOPHER C. COX, M.D., LL.D.,
OF MARYLAND.

REPORT ON AMERICAN MEDICAL NECROLOGY.

In presenting another report of deceased members of the profession, the Chairman is again compelled to allude to the indifference indicated by not a few of those to whom circulars for information have been addressed. In many instances no response whatever has been received, while in others the memoranda furnished were too meagre and destitute of interest to be rendered either entertaining or useful to the reader.

Notwithstanding the Chairman feels obliged to refer to these omissions of duty, he has great pleasure in acknowledging the prompt and full contributions of others. A few of these have been inserted as prepared by their authors, with little or no essential modification—others have been almost wholly rewritten, while not a few sketches have been culled and condensed from the newspapers and journals of the day.

Of the gentlemen especially entitled to this public expression of thanks, are the following: Dr. Henry Clarke, of Massachusetts; Dr. John Shrady, of New York; Dr. Charles L. Allen, of Vermont; Dr. Henry Bronson, of Connecticut; Dr. Edward Wallace, of Pennsylvania; Dr. A. H. Agard, of Ohio; Dr. W. B. Fletcher, of Indiana; Dr. J. M. Toner, District of Columbia; Dr. John Blane, of New Jersey; Dr. Wm. Marshall, of same; Dr. Thomas M. Logan, of California; Dr. S. M. Welch, of Texas; Surgeon J. K. Barnes, Surgeon-General U. S. A.; and Dr. P. J. Horwitz, Chief of the Medical Bureau U. S. N.; and C. Eversfield, U. S. N.

NEW YORK.

Some of the following sketches are presented as furnished by Dr. John Shrady, of New York city, to whose prompt and judicious service allusion has already been made. Others have been condensed from published notices culled from various sources.

BENJAMIN OGDEN, one of the earliest psychologists of the country, was born in New York, October 14, 1797. A student in the office of the renowned surgeon Wright Post, and in 1820 a graduate of the College of Physicians and Surgeons, he diligently improved the advantages offered by the schools and hospitals abroad, and at length entered upon his medical career in his native city in 1824. His practice, though extensive, added more to his experience than to his income, since his benevolence procured him a constituency more devoted than wealthy.

His self-sacrificing zeal during the cholera epidemic of 1832, conjoined with a marked talent for organization and a certain fertility of resource, attracted the attention of the city authorities, and led to his advancement to the position of resident physician to Bellevue Hospital. At this institution the pauper insane of the county were likewise cared for, but not to that extent which, in the new incumbent's opinion, the necessities of the cases demanded. With Dr. Ogden, to recognize an evil was to attempt its correction. So that, having enlisted in his scheme of an exclusive asylum for these unfortunates the cordial co-operation of Dr. James MacDonald, a prominent alienist, he had the gratification of seeing the commencement of the model establishment upon Blackwell's Island, during the spring of 1835. The work, however, was soon after suspended, and not resumed until the fall of 1837. As a matter of history, it may here be stated that the patients, 197 in all, were transferred, June 10, 1839, from Bellevue to the Island; the north octagon and west wing being then completed. About this time Dr. Ogden, by a singular coincidence, was reappointed to his old position of resident physician to Bellevue Hospital; he having filled that office continuously from 1834 to 1840, with an interregnum of only two years. The absence of his name from this list is very readily accounted for by its appearance during 1837 and 1838–9, as resident physician of the Bloomingdale Asylum for the insane. As evidence of the confidence reposed in the deceased by both the profession and the public, it will suffice to enumerate some of the responsibilities which he was called upon to assume. For a number of years he was consulting physician to the City Lunatic Asylum, and also sustained the same relation towards Sanford Hall, a private lunatic asylum, at Flushing, Long Island. In 1855 he was elected president of the County Medical Society, and four years afterward accepted the honor of being the first president of the Alumni Association of the College of Physicians and Surgeons, of

which college he continued a trustee from 1863 to his death. He also acted as a delegate to the American Medical Association more than once, and was borne on its roll of permanent members.

The subject of this memoir generally enjoyed good health; was hopeful, cheerful, and strictly Lutheran in his religious faith. He was well versed in the traditions of his native city; had a happy faculty of personal description, and a singularly apt genealogical memory; but owing to his busy habits, which disinclined him to any literary labor, much has forever passed away into "*unwritten history.*"

Dr. Ogden was suddenly stricken with paralysis, November 9, 1865; his speech, though not lost, became thick and indistinct; his general condition was pronounced critical in the extreme; but the naturally robust constitution, which he inherited from a rather long-lived ancestry, at length rallied so far as to restore to him full control over the faculty of articulation, and with it his cheerfulness, although he remained as powerless as ever. So he continued for nineteen irksome months, a model of Christian fortitude, more considerate of the comfort of his attendants than mindful of his own, until death startled his friends and relatives into a sense of their bereavement. His demise occurred at College Point, Long Island, June 18, 1867.

In the language of a condolatory resolution, adopted by the New York Academy of Medicine, of which he was one of the founders, "he adorned and beautified his profession by nearly half a century of usefulness in this the city of his birth; nor was the knowledge of his worth confined to its narrow limits, for the brightness and goodness of his character and his specialty as alienist were coextensive with his country."

JOHN HART, born February 9, 1810, in Danville, Caledonia County, Vermont; after receiving a fair academical education, principally at Concord, Brownington, and Peachem, towns in his native State, came to New York city at an early age. A teacher in a private school, and a clerk in a drug store, his aim in life appears more to have been a thorough mastery of the healing art. Hence he is found, during the cessation from his other toils, an assiduous attendant upon the private anatomical demonstrations in the office of Dr. Stephen Harris.

At length, the happy possessor of a diploma from the College of Physicians and Surgeons, bearing on its face the date, March 31,

1835, he soon received the appointment of visiting physician to the Northern Dispensary; but, for reasons of a private nature, resigned his position, after a faithful service of nearly a year.

Dr. Hart remained in the city pursuing his profession, subject to the usual vicissitudes incidental to those struggling for recognition without extraneous aids, until the winter of 1839–40. He then left for Syracuse, and there remained until February, 1848, the date of his return to New York.

After thoroughly identifying himself with the regular profession by joining the various accredited medical bodies, he chose the eastern section of the city as the theatre of his professional labors, but after the death of his wife, April 19, 1860, he gradually withdrew from the more exacting duties of his calling, without, however, any abatement of his interest in its progress. This he manifested by a systematic course of reading and a rather constant attendance upon medical meetings.

A man of courteous demeanor, scrupulously exact in attire, with kindly impulses, and an imposing presence, he possessed in an eminent degree the elements of personal popularity, but the delicate condition of his health, towards the close of his life, compelled him to neglect his more immediate interests for occasional and sometimes protracted sojourns in remote localities.

A desire to visit several friends in different parts of the United States, previous to his embarkation for Paris, as a representative of the American Medical Association, at the International Medical Congress, was soon put into execution, and it was on the occasion of a renewal of old intimacies at Pittsfield, Massachusetts, that he was overtaken by his final illness. He died August 19, 1867, bequeathing a share of his property to institutions under the patronage of the Protestant Episcopal Church.

SIMEON ABRAHAMS, son of Jacob and Catharine Nathan Wolf, was born in New York, January 13, 1810, and died suddenly, in that city, on the morning of April 19, 1867.

His medical studies were prosecuted under the direction of the late Dr. John H. Whitaker, Professor of Anatomy, etc., in the New York Medical College and Charity Hospital. Dr. Abrahams held a prominent position among the Israelites, and he filled in the Synagogue, and other organizations, many offices of great respectability and responsibility. A noteworthy event in the life of Dr. Abrahams was his visit to the Old World; and among other cele-

brated places to Jerusalem, where, in consideration of his superior scholarship, he received the title of "Rabbi," an honor seldom conferred on a foreigner.

Dr. Abrahams died possessed of vast wealth, which was distributed, according to his will, to various benevolent institutions.

RUSSELL B. BROWNELL, of Sharon, Connecticut, died in Upper Egypt, on the river Nile, twenty miles above Edfore, January 27, 1867, in the twenty-ninth year of his age. From an obituary sketch, which appeared in the columns of the *Philadelphia Medical and Surgical Reporter* (vol. xvi. p. 320), we quote the following:—

"His whole life was one of earnest application and study, and especially so in the pursuit of his profession, of which he was an ardent and indefatigable student. After receiving his classical education at Marietta College, Ohio, he began his medical studies with Dr. Weber, of Cincinnati, and from there proceeded to New York, and entered the Bellevue Medical College, where he graduated during the session of 1863 and 1864. He then held the position of House Surgeon in Bellevue Hospital, for the period of two years, and, during the latter part of his term, occupied the post of Senior Surgeon of the Charity Hospital on Blackwell's Island, during this time being also elected Curator of the Bellevue College Museum. About this period symptoms of pulmonary tuberculosis presented themselves, doubtless contracted by his close application and confinement within the walls of the hospital and autopsy-room, and after being strongly urged and advised, he thought best to accept the position of surgeon on board the steamer *Arago*. This he held for the period of eighteen months, but without any apparent benefit to his health; on the contrary, it was evident that his disease was steadily advancing. Thinking that a warmer climate might act more beneficially in his complaint, and be the means of prolonging life, he started from New York with a party of gentlemen intending to make a tour through Egypt. On reaching the latter place, he found himself gradually growing worse; still, that indomitable energy which had always characterized him continued to urge him forward, till finally, in his passage up the Nile, he was seized with a sudden pulmonary hemorrhage, that caused his death about ten minutes after the attack. A post-mortem examination (which he especially desired) showed an abundant deposit of miliary tubercles in both lungs, there also being two cavities in both their *apices*. His body was interred in

the vaults of a convent near by, his grave being hewn in the solid rock. Thus has passed away the sincere Christian, the earnest scholar, and perfect gentleman, his last words being a prayer to his God, that He would 'forgive his sins, and take him to his home.'"

WILLIAM HENRY CHURCH was born at Belvidere, Angelica, Alleghany County, New York, June 6, 1826, and died of pulmonary hemorrhage at Pau, France, Sept. 26, 1866, in the fortieth year of his age.

He was a medical student in the office of Dr. John C. Cheeseman, of New York; graduated at the College of Physicians and Surgeons in 1849; was three years in the New York Hospital; entered the army as medical director, on General Burnside's staff, August 5, 1861; resigned on 25th October, 1863, on account of ill health; sailed for Europe, October, 1865. He was appointed one of the surgeons of Bellevue Hospital in 1859, and was the consulting physician to the New York Institute for the Blind.

Among his contributions to Medical Literature were, a paper on "Resection at the Hip-joint for Morbus Coxarius," and one on "Enchondroma, or Cartilaginous Tumors." Another pamphlet, on "The Use of the Laryngoscope," was originally read before the New York Academy of Medicine.

JOHN COLLETT was born in New York, September 30, 1804, and died suddenly of angina pectoris, while awaiting at Peekskill the train from New York.

He studied medicine with Dr. Marinus Willett, and was graduated from the College of Physicians and Surgeons in 1831. Several years of his life were spent in lecturing to popular audiences on anatomy, physiology, and hygiene. In 1850 he was elected President of the Medical Society of Westchester County, New York, and at the time of his death was also a vestryman in the Episcopal Church at Peekskill.

As a physician, Dr. Collett is described as industrious and skilful, having considerable ability as a surgeon, and as a practitioner, very conservative. He never accumulated money, for "he was benevolent to a fault; the poor worshipped him, and the rich but half paid him."

EDWARD CAMPBELL COOPER was born at Peekskill, New York, February, 1802. His maternal grandfather, Major John Campbell,

was an officer in the army of the Revolution, and subsequently Mayor of New York city. Dr. Cooper graduated from the College of Physicians and Surgeons in the spring of 1824, and practised during the remainder of his life, with much success, first in Brooklyn, and subsequently in New York.

JAMES START COOPER was born at Peekskill, New York, Sept. 1, 1817. His academic studies were completed in the high school, of New York. He read medicine in the office of the late distinguished Dr. Joseph M. Smith, and was graduated from the College of Physicians and Surgeons, March 31, 1840. In 1842, after an extended western tour, he commenced the practice of his profession in New York city. Shortly after, a trip to Demerara was prolonged into a residence of some years. Here he acquired great surgical reputation, and some of his cases were reported, and favorably commented upon abroad. He returned to New York in 1844, and engaged actively in the duties of his profession.

For twenty-five years, Dr. Cooper was physician to the Asylum for Respectable Aged Females; about three years an attending physician to the Dewilt Dispensary; a member of the New York Pathological Society, New York Academy of Medicine, and the St. Nicholas Society.

Notwithstanding feeble health, Dr. Cooper continued in active practice until, prostrated at length by the effects of Bright's disease, he died on 11th of April, 1867.

WILLIAM RICE DONAGHE was born in New Haven, Connecticut, April 26, 1830. His preliminary education was pursued at the Hopkins Grammar School, in New Haven, and subsequently he entered upon a collegiate course at Yale College. Here, his health failing him, he was compelled to abandon his studies, and withdraw from college. So deserving a scholar, however, had he become, and so highly was he regarded by the Faculty, that Yale College, proverbially sparing of her favors, bestowed upon him the degree of Master of Arts, and his name is enrolled in the College Catalogue as if he had pursued the entire course, and graduated with his class.

His professional education was acquired at the University of Virginia, and at the Medical Department of the University of New York, from which he graduated in 1852. In 1852 he became acting senior assistant in Bellevue Hospital, and in due time was advanced to the position of House Surgeon. In 1853 he went to

Paris, where he spent fifteen months in attendance upon lectures and hospitals. Just after his return from Europe, in connection with Dr. T. G. Thomas (now a Professor of the College of Physicians and Surgeons), he commenced the instruction of medical students, and, until the opening of the war, had large and increasing classes.

Dr. Donaghe was attached to the Demilt Dispensary for nine years, first in attendance upon the class of diseases of the eye and ear, and afterwards to the surgical class. He was also surgeon to the Colored Home, and had been elected one of the attending surgeons at St. Luke's Hospital. Having served as demonstrator of anatomy in the University Medical College, in 1864 he was appointed adjunct professor of surgery in that institution; but unfortunately for its interests, he was never able to discharge the duties of this honorable position. In the fall of 1864 he delivered a course of lectures on Venereal Diseases, in this school. He had also lectured during summer courses, and in the winter course, when the professor was prevented from attending.

As a surgeon, his reputation was most creditable; he felt himself equal to any emergency that might call for surgical interference, and there was no one in New York of his age more at home in all the details of this branch of our profession. In 1856 he tied the right common carotid artery, for malignant disease of the palate.

In 1865, his intellect becoming seriously disordered, he was placed in the asylum at Bloomingdale, where he subsequently died, at the early age of thirty-six years.

In the old burying-ground at New Haven, where repose the remains of Webster, the lexicographer; of Eli Whitney, the inventor of the cotton gin; of David Humphreys, Washington's aide-de-camp; of Benjamin Silliman, one of the earliest and most successful teachers of chemistry and its kindred sciences; and a host of other great and good men, his body lies with kindred dust. His life, though brief, was brilliant. Had he lived through its summer, there is no doubt he would have attained an honorable position in the profession.

Horace Green. A very brief notice of this esteemed physician was furnished in the last necrological report. Further particulars of his life will not be unacceptable.

His medical education began in the office of his brother, a physician of reputation, in Rutland; and after the usual course of study, he graduated in 1824, at Middlebury, from the institution afterwards known as the Castleton Medical College. He was a member of the

American Medical Association, Fellow of the New York Academy of Medicine, and Corresponding Fellow of the London Medical Society, member of the New York County Medical Society, and also a member of the Phi Beta Kappa, and of the Society Cincinnati.

From 1844 to 1852 he was connected with the editorial department of the *American Medical Monthly.*

Dr. Green's published works are as follows: "Observations on the Influence of Malarious Atmosphere in the Prevention and Cure of Phthisis Pulmonalis;" "On the Effects of Ergot in Parturition, with Cases;" "Treatment of Epilepsy;" "On the Subject of Priority in the Medication of the Larynx and Trachea;" "Some Important Observations on Aphonia, arising from Organic Lesions;" "Remarks on Croup and its Treatment;" "On the Employment of Injections into the Bronchial Tubes, and into Tubercular Cavities of the Lungs;" "Report on the Use and Effect of Applications of Nitrate of Silver to the Throat, either in Local or General Disease;" "Lesions of Epiglottic Cartilage;" "Croup, its Treatment by Cauterization, and Catheterism of the Larynx;" "On the Difficulties and Advantages of Catheterism of the Air Passages in Diseases of the Chest;" "Treatise on Diseases of the Air Passages," 1846; "Pathology and Treatment of Croup," 1849; "On the Surgical Treatment of Polypi of the Larynx, and Œdema of the Glottis," 1852; "Selections from Favorite Prescriptions of Living American Practitioners," 1858.

In 1838 he visited Europe, and spent several months in attendance upon hospital practice, principally at Paris. He returned to New York in the winter of the same year, and, shortly after, commenced his investigations regarding diseases of the air passages, with which subject his name soon became prominently identified. His views, elaborated by study and experiment, afterwards gave rise to an animated discussion before the New York Academy of Medicine.

This specialty, in fact, interested him to the last; for we have it upon authority that the advent of disease interrupted a work intended to be more elaborate and complete than any he had before published on the subject.

The Doctor soon connected himself with the Castleton Medical College, as professor and president of the faculty; lecturing from 1840 to 1843 upon the Theory and Practice of Medicine. In 1850 he united with several other medical gentlemen in founding the New York Medical College. In this institution he occupied the same chair, and there continued to lecture until 1860, when, retir-

ing from the active duties of a teacher, he was elected professor emeritus.

Dr. Green received the degree of A. M. from Middlebury College, and in 1853, that of LL. D. from the University of Vermont.

Dr. Green died at Sing-Sing, New York, November 29, 1866, at the age of sixty years and eleven months.

RICHARD VARICK PELL was born in Barbadoes, Bergen County, New Jersey, on the 28th of July, 1843. His parents were William P. Pell and Maria Antoinette Varick, daughter of John V. B. Varick and Maria Rewson, both of whom belonged to New York families of Dutch origin.

His early educational advantages were such as were afforded by the neighboring village. Having completed his studies at the Polytechnic Institute of Brooklyn, he entered Columbia College, 1858, and graduated from it in 1862. He remained for two years a pupil in the office of Dr. C. L. Mitchell, of Brooklyn; attended the College of Physicians and Surgeons, New York, and after fulfilling the necessary conditions, graduated from the Bellevue Hospital Medical College in 1865, and became a resident physician on Blackwell's Island, and at Bellevue Hospital. His health, up to his sickness, was uninterruptedly excellent. But a sudden diarrhœa, merging into cholera, ended his life on the 28th of August, 1866.

CHARLES AUGUSTUS SEVERIN was born at Gronau, in Hanover, Germany, November 3d, 1830. He arrived in New York, in 1855, friendless, and entirely ignorant of the English language. After years of hardship and disappointment, he entered the volunteer service as assistant surgeon, in the First Battery, New York Artillery, and in that capacity served for eight months, with credit to himself, passing through the battles of 1862.

After his return from the army, which was in December, 1863, his fortune appears to have changed, his practice grew daily, steadily increasing to the time of his death.

He was a prompt and cool surgeon, a successful obstetrician, and a kind and faithful physician. As a man, he was ever temperate and frugal in his habits, a good husband and father, a genial friend, and generous to a fault.

LEVI FOLSOM was born in Limerick, Maine, on the 13th of December, 1802, and died October 25, 1867.

The Doctor received his academical education at Philips' Academy in his native town, and read medicine with Dr. Nelleam Swasea, also of Limerick; attended the last course of Anatomical Lectures delivered by Alexander Ramsay, at Parsonsfield, Maine, and attended Medical Lectures at Bowdoin College, Brunswick, Maine; and subsequently at Cambridge. In 1837 he commenced the practice of medicine in New Bedford, Massachusetts, where he had the most extensive practice, and acquired considerable wealth. In 1847 he received an honorary degree from Berkshire Medical College, and in 1850 he received, through the late Hon. J. K. Thompson, Senator of the United States and Secretary of the Camden and Amboy Railroad Company, a magnificent set of surgical instruments (see *Boston Medical Journal* for 1849 and 1850, page 143) for distinguished services rendered at the dreadful collision on the 2d of August, near Princeton, New Jersey. In 1852, his health becoming impaired, he retired from practice and went abroad, visiting all the principal colleges and hospitals in the Old World. On his return, finding his health still precarious, he opened an office in Cincinnati, Ohio. His wife dying about this period, leaving an only daughter, he removed to New York, where, in 1856, he resumed the practice of medicine. His daughter died in 1857, and in 1858 he married Marie de F., eldest daughter of Solomon Tobias, Esq., of Philadelphia, by whom he leaves one son. He was always ready to give the poor his gratuitous services, and there is many an eye will overflow, many a heart throb with anguish when they learn their kind physician and sympathizing friend can respond to their call no more. A devoted father, husband, and brother, may his memory ever be revered in the sad hearts his benevolent presence and untiring patience can no longer cheer.

M. Eugene Shaw abandoned a large practice in New York City, and joined the United States Army in California. On the 17th of October, the stage coach in which he was riding was attacked by a party of fifteen Indians, and Dr. Shaw was shot through the lungs, the wound soon proving fatal. The party were pursued near ten miles, but finally made good their escape, taking with them the body of Dr. Shaw, which they buried in Soda Lake.

Dr. Shaw was a young man in the prime and vigor of life, graduated from the medical department of the University of Buffalo in 1864, and was 26 years old at the time of his death. He was the only remaining son of Dr. Merrill H. Shaw, of Buffalo, who,

with his family and a wide circle of friends, are deeply bereaved by his sudden and violent death.

Dr. Shaw gave promise of great usefulness in his profession, and was already distinguished as a young physician for his attainments. In the war of the Rebellion he was so impatient for opportunity to share his part, that against the wishes of his friends he enlisted as a private. He was, however, soon detached from his Company and served as Acting Assistant Surgeon in the 89th New York. He afterwards served as Assistant Surgeon in the 116th New York, until the close of the war, when he commenced in this city the practice of his profession.

The foregoing brief sketch of Dr. Shaw was published in the *Buffalo Medical and Surgical Journal*, November, 1867.

CHARLES EDWARD MORGAN, son of the late George Morgan, a banker, was born in the city of New Orleans, Louisiana. His career as a scholar commenced early, as we hear of his prosecuting the study of mineralogy at eleven years of age, under the care of the late Rev. Dr. Hawks, and of the production of a work on natural philosophy at the age of 17.

After receiving his preliminary education in New Orleans, he entered Columbia College, New York, from which he received the degree of Bachelor of Arts, in 1854. He then entered the College of Physicians and Surgeons, and at the same time became a pupil of Professor Willard Parker, graduating in 1857. Seven years spent in Europe in the study of medicine and the collateral sciences, under Bernard, Robin Le Compte, Virchow, Du Bois Reymond, and Hoppeseiler, gave a rounded fulness to his knowledge.

Immediately upon his return in 1864, he engaged in the practice of his profession, giving special attention to diseases of the skin, on which he frequently lectured; and during the last two years he occupied a chair devoted to that specialty at the Northern Dispensary.

Within this time he had completed a work entitled "Electro-Physiology and Electro-Therapeutics, including an account of the Electric Fishes," which we believe was going through press a few days before his death.

He had contributed somewhat to the medical journals, and had read by invitation an article on his favorite topic before the New York Medical Journal Association, which appeared some time since in the columns of the *Medical Record*.

Dr. Morgan had many projects on foot, and seemed to feel that his mission pointed towards original investigations in medicine, more especially to physiology, as he could devote most of his time to such matters, not being under the necessity of practising medicine for a livelihood.

It was a rule with our lamented brother "to do whatever his hands found to do with his might," never thinking that aught worth doing at all should be done less than thoroughly well. As a microscopist he hardly had a superior in this country. Although an excellent linguist, speaking four or five different languages, he was perhaps more able in mathematics and the physical sciences, of which he was especially fond. He added to all these acquirements a good knowledge of painting. He died on the 4th of August, 1867, in the 34th year of his age, of acute diarrhœa and hemorrhage of the bowels, after an illness of five days.

In Dr. Morgan, the profession loses one of its most cultivated and able members. His studious habits, and his enthusiastic devotion to science occasion a profound regret that his life was so short.

Towards his professional brethren, he ever maintained a courteous and modest bearing, which never asserted superiority to the humblest member; ever ready to assist any who loved the science to which he had devoted his life, and tempering all his actions with the gentle grace of the Christian. Let us feel certain that he has received the plaudit, "Well done, good and faithful servant."

NICOLL HAVENS DERING, an alumnus of Yale College, of the class of 1813, and formerly a Trustee of the College of Physicians and Surgeons, New York, from which he graduated in 1817, died in Utica, New York, where he had resided for several years. He filled the position of Health Commissioner of New York city from 1818 to 1820, and was a member of the Health Board from 1812 to 1820.

ROBERT WATTS, the widely-known Professor of Anatomy in the College of Physicians and Surgeons, New York, died in Paris, France, September 8, 1867.

The son of Robert and Matilda Ridley Watts, he was born August 31, 1812, upon what is now the site of St. John's College, Fordham, New York. Having graduated from Columbia College, New York, in 1831, he began his medical studies in the office of

Professor Willard Parker, and, at the same time, attended the lectures at the institutions located in Pittsfield, Massachusetts, and Woodstock, Vermont. Subsequently, however, he became the pupil of Professor Alexander H. Stevens, in New York, and at length, in 1835, received his diploma from the College of Physicians and Surgeons.

Dr. Watts early evinced a preference for the study of anatomy, and while yet an under-graduate, rendered valuable and acceptable service to his first preceptor, then a professor in the Woodstock College. After a short probation as lecturer he became a professor both in this and the Pittsfield school. These honors were conferred upon him in 1838, in which year also he delivered a course of lectures upon Special Anatomy in his alma mater. Since 1839, when, as successor to Dr. John R. Rhinelander, he assumed the chair of anatomy, Dr. Watts has been identified as a public teacher in the College of Physicians and Surgeons—faithful to his engagements and a zealous promoter of its interests.

In 1848 the subject of this memoir, together with several other prominent physicians, took an active part in the foundation of the New York Pathological Society, over whose deliberations he presided in 1856. He was also a Fellow of the New York Academy of Medicine, and a member of the New York Medical and Surgical Society, as well as the Society for the Relief of Widows and Orphans of Medical Men, and the New York Medical Journal Association.

With the exception of Attending Physician to the Child's and Nursery Hospital from 1859 to 1863, Professor Watts held but few if any public positions other than those already credited.

Worn down at length, with a resignation begotten of the conviction that there was a limit to that energy which in him was a substitute for health, and advised by an intimate professional friend, this martyr to an overtasked physique sought relaxation in a voyage to Europe. During the latter part of May, in company with his wife, he set sail for England. The hard climate of this region drove him to the continent, where it was hoped that his tuberculosis might be benefited. But here, again, Dr. Watts was doomed to disappointment, for his disease steadily progressed, and, on August 30th, suddenly developed pneumo-thorax. Under this complication he rapidly sank, closing his pure and gentle life with the crowning graces of Christian submission and patience, and bequeathing the memory of a task well done, and a burthen bravely borne.

THOMAS W. HORSFIELD, a graduate of the College of Physicians and Surgeons, New York, of the class of 1839, died of paralysis, at Manhasset, Long Island, February 19, 1868, in the sixty-fifth year of his age.

PETER G. S. TEN BROECK, Surgeon U. S. A., died in Portland, Maine, December 19, 1867. He received his degree of M. D. from the College of Physicians and Surgeons in 1847.

NATHANIEL SAVAGE CROWELL, an alumnus of the College of Physicians and Surgeons, New York, of the class of 1851, was appointed an assistant surgeon U. S. A. three years afterwards. He subsequently identified himself with the insurgent army in the late civil war, and died at Augusta, Georgia, December 2, 1867.

JOHN TRENOR, Surgeon and Brevet Lieutenant Colonel U. S. V., an alumnus of the College of Physicians and Surgeons, New York, and who served with credit throughout nearly the whole war, died July 7, 1867, at sea, on board the steamship Arizona. The cause of his death was Panama fever.

EDWARD KELLY HOGAN died in New York city, July 26, 1867, aged thirty-five years, of phthisis pulmonalis, complicated with albuminuria. He graduated from the College of Physicians and Surgeons, New York, in 1863; served as Assistant Surgeon in the 120th Regiment, New York Volunteers, from March, 1863, to August, 1864; was appointed Assistant Surgeon U. S. V. October 13, 1864; was brevetted major U. S. V. November 27, 1865, and mustered out, November 29, 1865.

S. POMEROY WHITE died June 6th, 1867, in New York city, of typhus fever. He was the first in this country who successfully ligated the internal iliac for gluteal aneurism. This was previous to 1830, and was the fourth time it had ever been attempted.

HENRY P. SARTWELL, eminent in scientific circles, died at Penn Yan, N. Y., Nov. 16th, 1867.

Died, on Sunday evening, June 16th, 1867, at the house of Dr. E. R. Squibb, in Brooklyn, ROBERT O. ABBOTT, Brevet-Colonel and Surgeon, United States Army, aged 43 years.

PHILIP ROBERT O'REILLY, a native of Cootehill, County Cavan, Ireland, and of a lineage which boasted a descent from the ancient Prince Breffney, was born during the year 1818. His father, Dr. Robert O'Reilly, was a medical practitioner in Ulster County, Ireland, of acknowledged ability.

He did not graduate from the College of Physicians and Surgeons, N. Y., until 1847, although he began his medical studies many years before under the direction of Dr. Thomas Haran in his native town.

A faithful, earnest attendant upon the sick almost up to the very moment when his disease began to assert its mastery, and sharing largely in the rollicking humor of his race, he fell a victim to phthisis July 22d, 1867; he left many friends to cherish his memory and bewail his loss.

ISAAC WOOD, fourth son and sixth child of Samuel Wood (one of the founders of the present house of William Wood & Co., medical booksellers) and Mary Searing, was born Aug. 21st, 1793, in Clinton Town, Nine Partners, Dutchess County, N. Y.

His parents removed to New York city in 1803, and Isaac, having completed the routine of study usually prescribed for the youth of the period, entered the office of Dr. Valentine Seaman, before the completion of his eighteenth year. In 1816 he received his diploma from "Queen's College, Medical Department, in the city of New York," graduating in the same class with Dr. Joseph R. Drake, the poet and wit, and Dr. Bern W. Budd, the eminent conchologist. Previous to this period, however, he was licensed to practise medicine by the "Medical Society of the State of New York," and served the N. Y. Hospital as a member of the House Staff upon the "*surgical side*" from 1814 to 1816. He was afterwards elected a member of the Society of the New York Hospital January 6th, 1818.

Dr. Wood was the first resident physician of Bellevue Hospital, then known as a hospital for the sick and insane poor, and signalized his accession to office by separating the pauper lunatics from the rest of the city poor. This position he held from January 29th, 1826, to January 1st, 1833.

During the cholera epidemic of 1832, the Doctor performed his public duties with zeal and fidelity, excepting, of course, the short period when he himself was suffering from the malady at an early period of its invasion. This attack, however, in consequence of its

severity, ultimately led to his resignation of a post at once onerous and exhausting to his physical energies.

Dr. Wood again became prominent chiefly in connection with medical societies during a period extending from about 1845 to 1853. He was President of the Kappa Lambda Society in 1845, the Medical Society of the County of New York in 1846, and the New York Academy of Medicine 1850 and 1853. He was elected a Consulting Physician to Bellevue Hospital in 1852, and so continued until March 25th, 1868, the date of his death.

He was also for one year Treasurer of the American Medical Association, and since its organization, with which he was also identified, took a lively interest in its aims and objects.

Dr. S. W. Francis, in his *New York Physicians*, describes him as being about 5 feet 4 inches high and weighing about 175 pounds.

Dr. Wood died at Norwalk, Conn., of double pneumonia, respected by all for his kindness of heart, his public spirit, and conscientious devotion to duty.

ALEXANDER B. WHITING, at one time Health Officer of the Port of New York, died in New York, May 2, 1868.

WILLIAM FRISBEE LEWIS, an alumnus of the College of Physicians and Surgeons, New York, class of 1854, and attached to the Metropolitan Health Board, died in Brooklyn, New York, March, 1868.

JOHN SIMMONS, for a number of years Medical Adviser to the City Prison, New York, died of congestion of the brain, June 14, 1867.

HAMPTON HARRIOT, son of James Harriot, a builder, and Maria Brower, his wife, was born in New York city, March 16, 1825.

Educated, in part, at a boarding school in New Brunswick, New Jersey, and in part at the New York University, from which he received his baccalaureate degree, he entered the office of Professor Joseph M. Smith, in 1844, and graduated from the College of Physicians and Surgeons four years afterwards. Once in the ranks, he remained an earnest worker until February, 1867, when paroxysms of intense pain began to announce the approach of that malady which at last compassed his death.

"Thus withdrawn," says his pastor, the Rev. Dr. Ganse, "in his

prime from the profession to which he was enthusiastically devoted, and compelled to watch the advances of his own disorder, Dr. Harriot evinced a measure of patience and of Christian hope, which surprised and sustained all who were about him." * * * * "One could hardly be more missed from a household than he. For ten years he was husband and father to his widowed mother and to his brothers and sisters."

Dr. Harriot prepared the "Report of the Third Sanitary Inspection District" (the 5th ward), which may be found in the published "Report of the Council of Hygiene and Public Health of the Citizens' Association of New York upon the Sanitary Condition of New York."

He died of cancer of the liver, April 2, 1868.

PATRICK THOMAS BRENNAN, who died in New York city, Jan. 18, 1868, was born in the village of Drumcastle, county of Leitrim, Ireland, March 14, 1834. He began his professional studies under Dr. Tate, of Manor-Hamilton, in his native county, while quite young, and with him, as general apothecary to a dispensary, he served an apprenticeship of three years.

In 1847, immediately upon his arrival in America, he resumed his studies under the supervision of Dr. Abbot, in Cherry Street, with whom he remained eight years a useful and valued assistant. Before the expiration of his engagement with this gentleman, he entered himself a student of the New York University Medical Department, from which he graduated in 1855, receiving at the same time "a Certificate of Honor."

His inaugural thesis was entitled "Pleurodynia."

A member of the Medical Society of the County of New York, the Society for the Relief of the Widows and Orphans of Medical Men, and a permanent member of the State Medical Society, he took an active, though not leading part, in the promotion of their several interests. He was noted for the warmth of his attachment, his sturdy, self-reliant spirit, his extreme sensitiveness and sterling integrity. A widow and three children mourn his loss.

CHARLES TAGGART, a native of Glassmullaugh, County Tyrone, Ireland, was born May 14, 1820, and died in Jersey City, New Jersey, September 15, 1867, where he had resided for the last thirteen years.

With a diploma from Edinburgh, Scotland, dated in 1841, he com-

menced practice in his native county, but having emigrated to America, he again graduated from the Jefferson Medical College, Philadelphia, in 1848. After remaining awhile in Philadelphia, he finally settled in Jersey City.

He was attacked with caries of the ankle-joint in March, 1865, for the relief of which he submitted to an amputation at the lower third of the leg, March 3, 1866, but, as the sequel proved, without permanent benefit. An amputation at the knee-joint was finally advised, and the operation performed by Dr. Thomas C. Finnell, of New York, September 8, 1867.

His remains are at rest in the Catholic Cemetery, South Bergen, New Jersey.

JEDEDIAH MILLER, a graduate of the Medical Department of Dartmouth College, was born in Berlin, Vermont, September 17, 1811. Soon after having received his degree, which was in 1839, he commenced practice in Middleborough, Massachusetts, and was elected a member of the Massachusetts Medical Society during the succeeding year. Having removed to New York city in 1841, he commenced practice in the 11th ward, and soon became well known in political circles, having been elected an Assistant Alderman, and afterwards a member of the Board of Aldermen. In 1851, he was appointed a Health Commissioner of New York, and so continued for eleven years. He died December 27, 1867, in New York city.

JAMES T. GIBERT, formerly of New York, died in Paris, France, March 11, 1868, after a short illness.

JOHN G. HISLOP died in New York city, October 19, 1867, of cardiac disease, in the forty-sixth year of his age.

EDWARD COMIO MCGRATH, who received his degree of M.D. from the College of Physicians and Surgeons, N. Y., in 1854, died in Brooklyn, New York, February 21, 1868, aged thirty-five years.

Dr. McGrath, in a fit of temporary insanity, terminated his own existence. In the language of Hood—

> "Sad from life's history
> Glad to death's mystery."

PENNSYLVANIA.

CASPAR WISTAR was born in 1801, and died in Philadelphia, on the 4th of April, 1867 (of serous apoplexy), in the sixty-sixth year of his age. He read medicine with Drs. Parrish and Wood, and received his Doctorate in 1824. Immediately after graduation, he was elected to the office of Resident Physician of the Pennsylvania Hospital. After securing a large and lucrative practice, he withdrew from the active duties of the profession, and devoted the remainder of his life to benevolent and useful enterprises. The *Medical Record* thus alludes to this excellent man:—

"His nature was ardent, his perceptions quick, and his acute and ready mind possessed the faculty of fixing almost intuitively on the strong points of any subject submitted to its consideration. His friendships and attachments were strong and unwavering; his address warm and cordial; his conversation interesting and instructive, abounding in anecdote and illustration; he was fond of humor, prompt in repartee, and was a person whom it was always a happiness to meet, and from whose presence one rarely departed without pleasure and improvement. Such, in very brief and imperfect outline, is the character of Dr. Wistar, as it appeared to your correspondent; but it would be incomplete, indeed, if it failed to convey the impression that he was a humble and consistent follower of the Divine Redeemer. The true Christian was regarded by our departed friend as the highest style of man; and though conscious of his own infirmities and imperfections, he labored earnestly for the attainment of such excellence. Orthodox in his belief, and reverent in his deportment, he faithfully endeavored to order his daily walk in accordance with that of his great Exemplar, and to bring every impulse of a somewhat excitable temperament into subjection to His precepts. This was more particularly remarkable towards the close of his life; when, impressed with the conviction that the end was approaching, his disposition and manner became singularly childlike and affectionate, calling forth the love and admiration of all around him. He died at his residence in Philadelphia, on the 4th of April, 1867, after a short illness, of serous apoplexy, in the sixty-sixth year of his age; meeting the approach of death with the calmness and resignation which characterized his life, and with humble confidence in the merits of his Saviour.

Life will take a darker hue from his departure; but the remembrance of his beaming smile, his hearty welcome, his words of hope and encouragement, his unconquerable resolution, his love of right and scorn of wrong, and his undoubting faith in the final triumph of good over evil, remains to cheer and comfort us during the remainder of our pilgrimage, and to allure us onward and upward along the path which he trod.

All, all are gone; but mid the gloom
A bright and cheering ray is shed,
And memory, bending o'er his tomb,
In certain faith bewails her dead.

OHIO.

GEORGE GETZ SCHUMARD.—Dr. Schumard was born at Burlington, New Jersey, in 1825, finished his academic studies at Woodward College, and graduated in medicine from the University of Louisville, in 1847. He located first at Albion, Illinois, and subsequently, at Fort Smith, Arkansas, where he lived at the breaking out of the war.

Dr. P. S. Conner, in a report to the Cincinnati Academy of Medicine, thus alluded to Dr. Schumard: "A scientific and practical geologist, he made a number of private explorations, and accompanied the Red River Exploring Expedition, commanded by Captain, now Brig.-General R. B. Marcy, U. S. A., and the 'Artesian Well Expedition,' commanded by Captain, now Major-General John Pope, U. S. A. Still later, Dr. Schumard was State Geologist of Texas. His various scientific reports, made from time to time, are well known, and the profession will remember his discovery of an American substitute for gum Arabic."

In 1861 he was appointed Surgeon General of the State of Ohio; on the 5th August, 1861, he was commissioned a Brigadier Surgeon of Volunteers. He served for a time with General McClellan, and subsequently as Medical Director in Kentucky. In 1865 he resigned his position in the army, and resumed private practice in Cincinnati. In the summer of 1867 his health failed him, and on the 29th of September following he died of general paralysis.

JOHN DELAMATER, M. D., LL. D., was born in Chatham, New York, April 17, 1787, and died at Cleveland, March 28, 1867, after nearly sixty years of active service in his profession. His early

years were passed among the Huguenot exiles, who, persecuted and oppressed in their native land, sought religious toleration in the wilds of America. His whole life was characterized by the noble traits which so distinguished that peculiar people. His self-abnegation, loving truthfulness, and simplicity of character; his regard for justice and hatred of wrong; his devotion to study and his untiring industry, as well as his active benevolence and cheerful exemplary piety were all so strongly pronounced, so combined and tempered with modesty, discretion, and inflexibility of purpose as to set him apart from other men, and mark him as a representative son of a noble ancestry.

He read medicine in the office of Dr. Dorr, a practitioner of distinction in that day, with whom he entered into partnership, after having been admitted to practice by the Medical Board of Otsego County. He resided successively in Florida, Montgomery County, N. Y., Albany, and Sheffield, Mass. In the latter place he attained great popularity and success, and was persuaded to accept a professorship in the Berkshire Medical Institute, at Pittsfield. It was while holding this position that his peculiar ability as a teacher became apparent. In 1827 he was offered a leading position in the Medical School at Fairfield, and assigned by its Regents to the Chair of Surgery. Among his colleagues were such men as Trowbridge, McNaughton, and Beck, and many since eminent in the profession (among whom were Drs. Ackley, of Cleveland, and Brainard, of Chicago), were attendants upon his able lectures. About this time he held, in addition to his other duties, important chairs in both Dartmouth and Bowdoin colleges.

It was during his connection with the school at Fairfield that he made many of his most noteworthy operations as a surgeon; but so retiring was he, and so much did he shun public notoriety, that he never allowed the least record to be made, even of his most important surgery. Hundreds who have listened to him in the lecture-room will remember with what extreme modesty he used to make mention of his operations for excision of the scapula—an operation he was the first to perform in this country.

At this time his reputation had become so universal that he was offered positions in several of the medical schools and universities of the country, and steady inducements were offered him to accept, among others, the chair of Pathological Surgery in the Ohio Medical College at Cincinnati. Here he delivered a course of lectures in 1838, while occupying his chair at Geneva.

His distaste for life in a large city, and his growing love for the ingenuousness and simplicity of the country, decided his acceptance of a place in the Medical Institute at Willoughby, Ohio, where he remained six years, when he aided in the establishment of a medical college at Cleveland, whither he removed, and continued in that city until his death.

As a student, practitioner, and teacher he combined excellencies rarely united in a single individual, and thousands survive who bear testimony to the brilliant success he achieved in all public and professional relations.

He formally terminated his active duties by resigning his professorship in 1860, after forty years spent in public teaching and lecturing. During this time he had delivered seventy courses of lectures, embracing every department of medical science.

His pastor thus alludes to the closing days of this truly good and great man:—

"Feeble in the extreme in body, his mind remained unclouded almost to the last. As his age increased his faculties seemed entirely unimpaired. His intellect was bright, his expression of thought as exact, and his judgment as clear as in his best days. He was as much interested in facts and events. He cherished his science, his studies, his friendships. He wrote daily, and investigated facts with great ardor. The sense of the great change evidently approaching produced no excitement or anxious dread. He had made provision for that event, and a long life of Christian hope fitted him for the change."

Thus passed away, full of honors and years, one of the noblest men and most eminent practitioners of the age.

TEXAS.

JOHN L. WATKINS was born in Alabama, studied in the office and under the direction of Dr. Henry F. Campbell, of Augusta, Georgia, and took his degree at the medical college at that city. For several years he pursued the practice of his profession in Alabama. In 1850 he removed to Texas, and established himself at Brenham, in Washington County, where he soon acquired and enjoyed till his death an extensive practice. Dr. Watkins was highly esteemed by his medical brethren for his diagnostic skill, his sound practical judgment, and the thoroughness and extent of professional attainments, as well as for the unvarying courtesy and

high sense of honor which regulated his intercourse with them. In the original organization of the Galveston Medical College he was chosen Professor of the Theory and Practice of Medicine, and delivered his first and only course of lectures in Galveston, in the winter of 1865–6. Circumstances of a private nature preventing the removal of his family to Galveston, as he had intended, he resigned his position in the medical school and returned to Brenham. Dr. Watkins practised with great success and the most laborious and self-sacrificing devotion throughout the yellow fever epidemic of 1867, which visited Brenham with great severity, till finally, near its close, broken down by fatigue and the mental strain and tension of that trying period, he fell a prey to its ravages.

JOHN P. KEY died at Brenham, Texas, of yellow fever, in September, 1867. Dr. Key was a native of Virginia. He received his professional education at the University of Louisiana. He settled at Brenham and engaged in practice in 1845, and continued to reside there until the period of his death. His industry, ability, and sterling worth well entitled him to that high position in the profession and in public esteem which he enjoyed. Frank and incapable of dissimulation, modest, laborious, and conscientious, Dr. Key leaves behind him a stainless professional and personal reputation.

EDWARD W. ROGERS died at Chapell Hill, Texas, of yellow fever, in September, 1867, in the thirty-second year of his age. Dr. Rogers graduated at the Medical Department of the University of Louisiana in 1860. He was an intelligent and promising young physician, and a gentleman of excellent private character.

D. B. THOMAS, for many years a prominent and highly respected physician of Dulles, Texas, died in June, 1867, of phthisis pulmonalis. Dr. Thomas was a native of Kentucky, and a graduate of the Jefferson Medical College of Philadelphia.

ROBERT H. HANNA, of Galveston, Texas, died of yellow fever, on the 5th of September, 1867, in the twenty-fourth year of his age. Dr. Hanna was a graduate of the Galveston Medical College in the spring of 1866, and occupied for some time after the responsible position of House Surgeon in the Island City Hospital at Galveston.

The subject of this notice joined to many pleasant personal qualities more than ordinary abilities, and energy of character, and gave every promise of usefulness and distinction in the medical profession had his life been prolonged.

ROBERT G. SALMON died of yellow fever in Galveston, Texas, August 15, 1867. He was a native of the State of New York, and had resided and practised more than twenty years at Brazoria, Texas. He had removed his residence only a few months previously to Galveston. Dr. Salmon was a competent and well-informed physician, and a gentleman of high personal character.

WILLIAM H. GANTT was born in St. Louis, Missouri, and died of yellow fever, in Galveston, Texas, on the 6th of September, 1867, in the forty-third year of his age. He graduated at the Missouri Medical College; and soon after removed to Alabama, where he established himself in practice and continued to reside till 1855, when he settled in Washington County, Texas. He served during the late war as a medical officer in the Southern army, till impaired health obliged him to resign that position. In 1865 Dr. Gantt was elected Professor of Physiology in the Galveston Medical College, then just established, and filled the duties of the chair assigned him very acceptably to the class and his colleagues. His zeal and energy in the cause of medical education won for him their esteem and respect. In the winter of 1866–7 he discharged the duties of his own chair and also that of the Theory and Practice of Medicine. Dr. Gantt was a highly respectable and successful practitioner, and a fluent and interesting lecturer on scientific subjects. He had also, from time to time, contributed to the literature of the profession, valuable practical articles, through the medium of the different medical journals of the South.

PLEASANT W. KITTRELL, one of the most widely and favorably known physicians of Texas, died at Huntsville, in September, 1867, of yellow fever, in the sixtieth year of his age. Born in North Carolina and a graduate of the University of that State, at Chapell Hill, he received his professional education at the University of Pennsylvania. He began practice in North Carolina, afterward resided and practised with ability and success at Greenboro', Alabama, whence he removed to Huntsville, Walker County, Texas, in 1862. Dr. Kittrell was a man of mark in the profession

and in the community. He was an accomplished classical scholar, variously and deeply read in his profession, and an able and successful practitioner. It is due, not less to the profession than to themselves, that the character and services of such men as Dr. Kittrell should be made known and appreciated. The life of the physician is one of studious seclusion and of devoted ministrations for the relief of suffering humanity, rather than of display and selfish aims. His labors are based on higher motives and nobler aims than the mere love of mammon, or even the worthier incentive of ambition, which, as has been finely said, "Like autumn gilds, ere it withers." Particularly in seasons of wide-spread pestilence is the true physician the benefactor of his race. This was well illustrated in the closing scenes in Dr. Kittrell's professional career. He fell a victim to his zealous devotion to the duties of his profession, in the fearful epidemic which visited Huntsville, in common with a large portion of southern Texas, in the summer and autumn of 1867. His system, overtaxed by intense and unremitting labor in his efforts to relieve the sickness and suffering by which he was surrounded, had lost its power of resistance, and when attacked, quickly and easily succumbed to the disease.

Dr. Kittrell was not only most estimable in all the private relations of life, but a most valuable and public spirited citizen. The cause of education secured his active exertions, and his benevolence was aroused and enlisted by whatever was proposed for the moral, educational, and religious interests of mankind.

GABRIEL M. BAKER, a prominent and highly respected physician of Huntsville, Texas, for the last eighteen years, died of yellow fever, in September, 1867. He, too, fell at the post of duty, and in the cause of suffering humanity.

NEW JERSEY.

JOHN NEILSON WOODHULL was born in Cranbury, New Jersey, July 25, 1807; graduated at the College of New Jersey, in 1828; studied medicine with Dr. Howell, in Princeton, and graduated in the University of Pennsylvania, in 1832.

He commenced practice at Middletown Point, and in 1835, the health of his preceptor having failed, he entered on the practice in Princeton and its vicinity, where he continued to reside until his death. During the later years of his life he confined himself chiefly

to an office practice, many of his patients coming from distant towns and counties, and even from other States.

Dr. Woodhull accumulated a considerable estate from the proceeds of his profession, of which he bequeathed to the College of New Jersey, property amounting in value to $20,000 or more. He left no family.

CHARLES COOK was born near Bordentown, Burlington County, New Jersey; commenced the study of medicine in the autumn of 1843, with his uncle, Dr. Joseph Cook, of Bordentown, dividing his time between his office and Dr. Leidy, of Philadelphia, with whom he studied during the winter months. After attending three courses of lectures, he received his diploma from the University of Pennsylvania, in April, 1845. He commenced practice in Bordentown, but subsequently removed to Jersey City. He was principally instrumental in organizing the Hudson County Medical Society, and was a member of the American Medical Association.

He was thrice appointed City Physician; passed uninjured through the ship fever, the epidemic dysentery of 1848, and the cholera of 1849 and 1858. During the rebellion he did service as a volunteer surgeon at White House; in 1865 was appointed Physician to the Children's Home.

Dr. Cook died 17th January, 1867, and was interred in that beautiful city of the dead, South Laurel Hill, Philadelphia.

EDMUND W. ALLEN, of Shrewsbury, N. J., died May 16th, 1867, in the eightieth year of his age. He was among the first to establish the Monmouth County Medical Society, and was an active, successful, and earnest practitioner of medicine for more than half a century.

JAMES THEODORE CALHOUN was born at Rahway, N. J., Sept. 17th, 1838; entered upon the study of medicine in the office of Dr. Samuel Abernethy, and graduated at the University of Pennsylvania on January 17th, 1859.

Dr. Calhoun commenced practice at Rahway, where he remained until June, 1861, when he entered the service as Assistant Surgeon of the Fifth Excelsior, Seventy-fourth New York Volunteer Regiment. In May, 1863, he was appointed Assistant Surgeon in the Army, and on 27th September, 1864, was assigned to duty as Surgeon-in-Charge of Ward U. S. A. Hospital. He fell a victim

to the cholera, then prevailing at Hart's Island, on 22d of February, 1867.

Dr. Calhoun was present at the siege of Yorktown, the battles of Williamsburg, Fair Oaks, the seven days' engagements, Malvern Hill, Bristow Station, Second Bull Run, Fredericksburg, and many others. He was appointed Surgeon-in-Chief of the Second Division, Third Corps, commanded by Major-General Berry. In all these relations he acquitted himself with credit and advantage to the country.

ROBERT W. COOKE, of Holmdel, Monmouth County, died of enteritis, September 27th, 1867, in the seventy-first year of his age.

CHARLES TAGGART, of Jersey City, N. J., died September 15th, 1867, his death resulting from secondary amputation of the leg.

WILLIAM ROCKWELL died at Long Branch, N. J., December 30th, 1867, in the sixty-eighth year of his age. He was a member of the American Medical Association.

DELAWARE.

JAMES ROGERS MITCHELL was born July 30th, 1806, in Caroline County, Md. Soon after his father removed to Milford, Delaware, and in the academy of that town he received his literary education. At the age of seventeen years he entered the office of Dr. William Burton as a student of medicine, but after a short time went to Baltimore, where he continued his studies with Dr. Potter, then one of the Professors in the University of Maryland, at which institution he attended lectures and graduated. Returning to Milford he commenced the practice of his profession, in which he continued with little intermission for forty years. He died aged 61 years.

As a physician Dr. Mitchell possessed talents of a high order, was faithful in the discharge of his duties to his patients, whether among the rich or poor, and always labored to elevate the character of the profession of his choice. In the treatment of the diseases of the locality in which he lived, he was not excelled by any in the State.

WILLIAM BURTON was born near Lewiston, October 16th, 1789,

and died August 5th, 1866, aged 76. He attended lectures at the University of Pennsylvania, and spent most of his professional life in Milford; in 1832 was elected Sheriff of Kent County, and in 1858 Governor of the State. Dr. B. was a practitioner for more than half a century, a man of genial manners, kind disposition, and emphatically the poor man's friend.

DISTRICT OF COLUMBIA.

WILLIAM JONES was born April 12th, 1790, near Rockville, Montgomery County, Maryland. His early education was pursued under the direction of the late Rev. John Breckenride, a gentleman of fine classical attainments.

Dr. Jones read medicine with Dr. Tyler, of Frederick City, Md.; attended lectures at the University of Pennsylvania. During the War of 1812 he served most acceptably as Surgeon in the United States Army, and was retained, on account of his eminent ability, when the army was reduced in 1815. Subsequently he resigned his army position and united in the practice with Dr. Blake, upon whose death Dr. Jones succeeded to and retained the business of the firm. His medical career was marked by untiring devotion to the duties of his calling. No exposure checked his ardor, no sacrifice depressed his ambition.

General Jackson, upon his accession to the Presidency, appointed him Post-master at Washington. To this position, after a period of nine years, he was again chosen, only to be reappointed for the third time.

Dr. Jones practised medicine for more than fifty years, during which time he became prominent as a member of leading medical societies, and was an earnest and successful practitioner of the healing art.

On the 25th of June, 1867, the subject of this sketch, without a struggle, passed from earth to heaven.

An admirable biographical sketch by Dr. John B. Blake thus sums up a few of the excellencies of Dr. Jones: "No one," says the author, "had more devoted friends than Dr. Jones. He was exceedingly affable, and his pleasing manners and genial disposition made him a very attractive acquaintance. His demeanor showed him to have been well bred, and, having had the advantages of the best society, he was an elegant and refined gentleman. A high-toned honor regulated his intercourse with his fellow-men, and sterling

integrity marked all his transactions. Dauntless courage and rigid adherence to truth were distinguishing features of his character. He was strictly moral, and a firm believer in the Christian faith, the precepts of which he carried into practice in the daily walks of life."

HORACE PECHIN MIDDLETON was born in the city of Washington, D. C., November 1, 1839, and died in that city, of organic disease of the heart, October 27, 1867. He was the son of Daniel Wesley Middleton, Esq., Clerk of the Supreme Court of the United States. Dr. Middleton received his preparatory education at the best schools of Washington and Alexandria. His collegiate course was completed at Columbia College, District of Columbia.

In the summer of 1860 he commenced the study of medicine with Dr. I. J. Waring, in his native city. He attended two full courses of medical lectures at the National Medical College. He then went to Philadelphia, and took a course at the University of Pennsylvania, where he graduated, in the spring of 1863. In the fall of that year he was elected resident physician of the Episcopal Hospital, at Philadelphia, in which capacity he served for one year with great ability and acceptableness to the trustees and consulting medical officers of that institution. In 1864 he opened an office in Washington City, and entered upon the practice of his profession with flattering success. He was one of the original members of the "Clinico-pathological Society" of the District of Columbia, and from time to time occupied its most prominent offices.

Dr. Middleton was a close student, and a careful observer of the various forms of diseases, making frequent autopsies to verify and illustrate his diagnosis. He was also an earnest and extensive reader of the latest and best medical works and journals, and was rapidly making his way to the front rank of his profession, when his health, never very robust, began to give way. From early childhood he had been subject to attacks of inflammatory rheumatism, which eventually involved the heart in disease. In the fall of 1864 this condition began to assume a more threatening aspect, so that, in the spring of 1867, he was obliged to abandon practice, and at length death put a period to his suffering. In 1865, on the organization of an auxiliary course of lectures at the National Medical College, the doctor was appointed to the chair of Diseases of Children, a position he continued to hold until his demise. The doctor was brought up in the Protestant Episcopal Church, of

which he became a full member in 1858. His life was in perfect accord with his Christian profession. He was particularly noted for his agreeable manners, genial disposition, correct habits, and high moral character. Dr. Middleton was a member of the Medical Society of the District of Columbia, and the Medical Association of the District, both of which bodies expressed, by resolutions, their profound sense of the great loss sustained by his death.

RUFUS HOLMEAD SPEAKE was born in Alexandria, Va., April 17, 1807. He was the son of Captain Josias M. Speake, formerly of the United States Navy.

The subject of this sketch was prepared for college at the Academy in Alexandria. His classical education was obtained at Georgetown College, District of Columbia, and after his graduation he commenced reading medicine in the office of Dr. Warfield, of Georgetown. He attended medical lectures at Washington Medical College, Baltimore, Md., in the winter of 1827 and '28, and graduated as a Doctor of Medicine in the spring of 1829. He practised in Montgomery County, Md., until 1849, when he removed to Washington, D. C. Here he continued to practise, with reputation and success, until 1863, when his health became so much broken by frequent exposure and colds contracted in the discharge of his duties, as to compel him to decline practice altogether.

At this period he obtained an appointment as clerk in the Second Auditor's Office, the functions of which were not laborious, and by extraordinary care he was enabled to discharge the duties of the place, with but few interruptions, until August 1, 1867, when he resigned. His life was terminated one month after, greatly to the regret of a large circle, and to the profession, who held him in the highest esteem.

GEORGIA.

From the *Southern Recorder* we take the following sketch of Dr. JOHN RUGGLES COTTING, who was born in Acton, Massachusetts, in 1784 and died at Milledgeville, Georgia, on the 13th of October, 1867:—

"By an ancient entail he was born remainder-man to an estate of $5,000,000 value in Boston; but some of the title papers being burned in the Town House, and the property being occupied by many innocent purchasers under preceding tenants for life, to

which purchasers and their widows and orphans, his recovery, and even his lawsuit, would have been in some cases distressing, Dr. Cotting, careless of riches, kind of heart, and ardent only with a love of science, abandoned his inheritance, gave himself up to less sordid pleasures, and died poor. His first fifty years were spent in Massachusetts; his last thirty in the valley of Oconee, in Georgia, at Milledgeville. Refined by nature and by all the good influences of Harvard and Dartmouth Colleges, he perfected his excellent education by several years of professional life in Amherst College, in high schools, and in the Berkshire Medical Institute; and besides all this, during all these years, he was a settled Congregational minister of the Gospel. With such a nature and such a discipline, Dr. Cotting could be nothing less than a purified, exalted, refined spirit; an alien to the busy throng of material men. His love of science was far from being altogether speculative; for, besides teaching chemistry and kindred sciences, he was engaged, during the last British war, with a company of chemists and capitalists at Boston, in manufacturing several articles never before produced in America. He was an author, too, one of his books on chemistry being for several years a text-book at Yale College; another was a text-book on geology. In 1835 Dr. Cotting removed South, and was first settled in Augusta, Georgia, where he was engaged by some liberal enlightened gentlemen, all, or mostly, cotton planters, to make a geological and agricultural survey of Burke and Richmond counties. This important work, the first of its kind in Georgia, was done in the year 1836; his map and drawings were deposited in the Medical College of Georgia, at Augusta, and his report, a very interesting duodecimo, with its local descriptions, its geological accounts, its analysis of cotton lands, and its table of fifty-seven *genera*, embracing unnumbered varieties of fossils, was published and submitted to Governor Schley, who laid it before the legislature and urged them to order a similar survey of the State. They adopted his advice, appropriated $10,000 to the service, and Governor Gilmer appointed Dr. Cotting to the office of State geologist. The work was carried on for two years, when, the banks of the United States all breaking, the price of cotton falling very low, and general financial distress occurring, the legislature withdrew the appropriation, and the survey ceased. During its progress, Dr. Cotting, with indefatigable but unappreciated diligence, collected merely in the eastern counties of the State, and in the extreme southwest county, Decatur, a rich herba-

rium of our peculiar flora, and a cabinet of our fossils and minerals, of wide scientific embrace or nomenclature, and of rare interest. Unfortunately for the cause of science and art in the "Empire State of the South," the geological survey of Georgia was stopped, and Dr. Cotting's noble collection of specimens of our fossils and minerals was distributed among the colleges or otherwise disposed of—lost for all known uses yet heard of, even before it was classified —when the professors of Germany were actually forwarding duplicates to Milledgeville and begging for an exchange of cabinets, and when the Emperor of Russia was soliciting a copy of his report for the Royal Library at St. Petersburg. His name was well known and his great work appreciated by the learned men of Europe and the United States, many of whom were his correspondents."

VERMONT.

WILLIAM AARON HITCHCOCK was born at Great Barrington, Massachusetts, January 13, 1805. After a good common school education, he was placed in a cooper's shop to learn the trade, in which he labored for some years.

Abandoning a pursuit so uncongenial to his tastes, he entered the Rensselaer Institute, at Troy, New York, preparatory to the study of medicine, for which he entertained a strong predilection from his very childhood. After leaving Troy, he pursued the study of medicine with Earl Cushman, M. D., of Orwell, Vermont; attended lectures at the Castleton Medical College; and graduated with honor in 1829. In the spring of 1830 he settled in the town of Shoreham, Vermont, and entered zealously into the practice of his profession, giving the whole of his valuable life and energies to the service of the people of that town and vicinity.

Doctor Hitchcock had a clear brain, was quick and accurate in his diagnosis, prompt and energetic in his treatment. He was keen and discriminating in his observations; diligent and appreciative in his reading; keeping far in advance of most country practitioners; possessed of a remarkably retentive memory. His sound judgment, indomitable will, and perseverance enabled him to work out a successful career in the profession of his choice. Few practitioners secure and retain, in so large a degree, the confidence and affection of a community, as did Dr. Hitchcock.

Always healthy, he rarely declined a sick call on account of

fatigue, and often performed an amount of labor which would have hopelessly broken down a less robust system. In the last two or three years, however, he had several attacks of pericarditis, leaving him the victim of uncomfortable symptoms. A severe attack, during the summer of 1867, complicated with pneumonia, made more decided impression upon his constitution. From this he never entirely recovered, although still able to do considerable business through the autumn. Early in the winter, after fatigue and exposure in the prosecution of his professional labors, there happened a recurrence of the pericardial trouble, attended by considerable effusion and consequent dyspnœa. Remedies failed to give relief. He lingered on with progressive œdema of the lower extremities, and the usual accompaniments of this distressing disease, until the morning of the 25th of February, 1868.

His private character was ever strongly marked by his early training and education. His habits were always most temperate. He never indulged in dissipation of any kind, and wholly eschewed tobacco and spirituous liquors. He was pure in his morals, and died an example of virtue and religion.

MASSACHUSETTS.

JAMES JACKSON, the acknowledged chief of the medical profession in New England, was born at Newburyport, Mass., October 3, 1777, and died, full of years and honors, on August 27, 1867. He received his Baccalaureate from Harvard College in 1796, and graduated in medicine, from the same institution, in 1809. Entering immediately upon practice, he rose rapidly to distinction, and soon became recognized as a luminary of no ordinary brightness. Three years after graduation, he was appointed Professor of Theory and Practice in the Medical Department of Harvard University; in 1817 was chosen the First Physician of the Massachusetts General Hospital, and was repeatedly elected President of the Massachusetts Medical Society.

Although of naturally delicate constitution, Dr. Jackson, by strict attention to the laws of health, continued, until near the end of his long life, with a fair share of physical vigor and an unimpaired intellect. He died at length, of no special disease, but of a worn-out body and mind.

One of his eulogists (himself no ordinary man) thus alludes to

the honored head of the profession in Boston, whose light had been so recently eclipsed in death:—

"When some of us first knew Dr. Jackson, now gratefully remembered as our earliest and longest professional friend, he had been at least ten years engaged in active practice, and was then almost at the zenith of his professional reputation. He had rapidly risen to this point by the possession of qualities not common at that day, when medicine was less a liberal science than it now is; when the community were perhaps more exacting, while they were less discriminating, and when the judgment of a man's own peers could not always be depended on for impartiality, if, indeed, for competency. The qualities that distinguished him then, as since, were habits of unsparing application, a power of rapid acquirement, and of ready adaptation of knowledge to use. To these were superadded the high moral attributes of an uncompromising love of truth, of justice to the claims of others, of a deep sense of the responsibilities of his profession, and a devotion amounting almost to parental love towards those who had become the objects of his professional care."

He further continues:—

"We might perhaps find men in whom single qualities were more developed than any one for which he was distinguished; not easily a man whose outfit for the duties of life was more admirable, and who used all his faculties to greater advantage. He retained his power and his disposition to be useful into some of the last years of his protracted life. When mind and body alike felt the weight of infirmity, his tender affections still drew him to those he loved. There is a story that old men have been kept alive by transferring the fresh blood from young veins into their own. Many young hearts were tributary through nobler channels to his old age. The love of the second and third and fourth generations gave new light to his eye and fresh color to his cheek, as they gathered around him to look, to listen, to serve, to caress. It was a rare delight to meet in his own home this most beloved of old men, who seemed to have hoarded the sunshine of more than fourscore years to give it back in smiles to those whom he has now left in a world less bright since he is gone.

"So passes from us the last of those three brothers whom many of us remember as honors to their several callings—types and patterns of the best class of American citizens. United in the dearest friendship while they lived, we may hope that they are at length

reunited among the good and faithful servants who have entered into the joy of their Lord. As the last of them leaves us we seem to look upon them once more as when we used to see them together in their daily walk. Charles, grave, learned, judicial by nature, gentle, unselfish, modest, whom to have known is the most precious legacy of the past to many of the living; Patrick, great-hearted, impetuous, sanguine, constructive, executive, whose footprints were among the first along the opening track of New England's progress; and with them this teacher of teachers, this healer of the sick, this counsellor of the perplexed, this consoler of the sorrowful, this benefactor of the needy, whose sympathies were boundless as the day, and whose priceless labors extended through two-thirds of a century. With all gratitude for his beautiful and most useful life, feeling, as we do, that he had filled the full measure of his years and of his services, it is yet with sorrowing hearts that we strike from the roll of living men the revered and cherished name of JAMES JACKSON."

J. MASON WARREN, son of the late Professor J. C. Warren, was born in 1811, and died in Boston, of cancer of the bowels, August 20, 1867.

Both his father and grandfather were distinguished surgeons, but the subject of this sketch exceeded them both in ability. He acquired a large surgical practice, and his reputation, especially great in New England and the British Provinces, was fully recognized by the most appreciated practitioners of Europe.

No better review of his virtues can be presented than that embraced in the following resolutions. They were presented by Dr. O. W. Holmes, at a meeting of the Suffolk District Medical Society on the 20th of August, 1867.

"*Resolved*, That by the death of J. Mason Warren, its late President, and associate from the time of its foundation, this Society has been deprived of the counsel and friendly presence of a member at once honored and beloved, who brought a sound knowledge, a large and wise experience and an ever-willing helpfulness to its deliberations; who added liberally to its usefulness from the ample records of his practice; whose native dignity of character was so joined with engaging social qualities that he was always respected as a man, and always welcome as a companion.

"*Resolved*, That to the medical profession of this city and of this State, the death of Dr. Warren, one of the most widely known and

valued practitioners counted upon its rolls during the present generation, is a loss which will be deeply mourned by all its members; that his memory will be cherished by them as that of a fellow laborer, whose life was one long work-day of professional duty, and yet found time to make many important contributions to the literature of a calling which he practised with a skill and success worthy of the illustrious name he bore.

"*Resolved*, That the medical profession of this country and the great body of the healers of men throughout civilization have lost from their ranks one who honored their occupation by his personal character and bearing, who enriched their art by his invention, who illustrated its possibilities by his prudent boldness, who served its interests faithfully in life, and bequeathed to it a record of experience full of instruction, which will be studied with profit, not only here and in our own day, but by students of other lands and in after times.

"*Resolved*, That the members of this community, in the midst of which Dr. Warren has, for many years, exercised his beneficent office, have been deprived by his death of a counsellor of whom it is enough to say that he was to them what his father was to their fathers, what his grandfather was to their grandfathers—a master to control the resources of his art, a servant to obey the call of humanity.

"*Resolved*, That this Society feels, and would desire respectfully to express, the profoundest sympathy with the family of its associate, our departed friend, and that it would place these words of heartfelt tribute before them, not as adequate marks of regret, but as an assurance that the grief of those nearest to him whom we cherish henceforth in our memory, is shared by a wide circle of friends, who know how sorrowful the home must be which has lost one so worthy of love and honor."

FRANCIS LELAND, of Milford, Massachusetts, died October 5, 1867, aged 50 years. He served, with credit, as a regimental surgeon during a greater part of the War of the Rebellion, and was many months a prisoner, encountering great exposures and hardships.

He was a most estimable man and a highly successful physician.

CONNECTICUT.

WORTHINGTON HOOKER, born March 2d, 1806; graduated with high honor, at the Yale College, in 1825; studied medicine in Philadelphia and Boston (taking the Boylston prize in the latter city for the best medical essay); took his degree of M. D. from Harvard College in 1829, and settled in Norwich, where he acquired much celebrity as a physician and writer. In May, 1844, he read before the Connecticut Medical Society an able paper on "The Respect Due to the Medical Profession, and the Reason that it is not rewarded by the Community." In 1849 he published a work of 422 pp., duodecimo, on "Physician and Patient." In 1850 he competed successfully for the "Prize Fund Dissertation" of Rhode Island. The subject of his essay was "Lessons from the History of Medical Delusions." In 1851, as chairman of the committee on Medical Education, he read before the American Medical Association, at its Charleston Session, an able report which was highly esteemed. In 1864 he was elected one of the Vice-Presidents of this Association. In 1852 he was chosen Professor of Theory and Practice of Medicine in Yale College. His inaugural address was entitled, "The Present Mental Attitude and Tendencies of the Medical Profession." In 1853 he published "Human Physiology," followed by the "Child's Book of Nature" in three parts; the "Child's Book of Common Things;" "Natural History;" "First Part of Chemistry;" "Natural Philosophy;" "Chemistry;" "Mineralogy and Geology." This series of books, intended to popularize science, and adapt it to the use of schools were widely known and appreciated. Subsequently he bore off the prize offered by the American Medical Association, his subject being "Rational Therapeutics." Before the Connecticut Medical Society, in 1866, he read a scientific paper entitled "Man, an Original Creation, not a Development, as taught by Darwin and Huxley."

In the midst of incessant labor and unceasing private practice, the preparation of books, contributions to journals and reviews, he died November 6, 1867, lamented by a large circle who had known only to admire and love him.

SOUTH CAROLINA.

GEORGE LOGAN was born at Charleston, South Carolina, January 4th, 1778. Following the same profession as his father, who

was an alumnus of the Edinburgh School, he went to Philadelphia in 1800, and was graduated in the University of Pennsylvania, contemporaneously with Drs. Charles Caldwell and Joseph Hartshorne. Before returning to his native city, he married Margaret White Polk, of Delaware, an orphan and ward of the late Cesar A. Rodney, formerly U. S. Minister to La Plata. For half a century he pursued the practice of his profession in Charleston—holding creditably several public appointments and offices. During a score of years he performed the duties of Hospital Surgeon at the U. S. Navy Yard at Charleston, and at the date of his resignation was one of the oldest surgeons on the naval list. For a number of years he was elected Physician to the Poor House and Orphan House. The latter institution particularly seemed to enlist his professional sympathies, and for forty-five years he administered *con amore* to the sufferings of the fatherless. The result of his vast experience thus acquired, was embodied in a popular work of some 300 pages "On the Diseases of Children," which was, at the time of its publication, highly appreciated both by the profession and the public. In 1854 the infirmities of age induced him to accept an asylum at the residence of a prosperous son in New Orleans, where he remained until the day of his death, February 13th, 1861, at the age of eighty-three. Dr. Logan raised nine children—six sons by his first wife, and one son and two daughters by his second wife, Mary Ann, daughter of Captain Turner, of Charleston. Two of the former as well as two of his grandsons, adopted his profession. The first of these, Dr. Samuel White Logan, emigrated to Louisiana immediately after securing his diploma, and up to the day of his untimely death, on the 11th of November, 1852, was constantly engaged in an arduous practice in the parish of St. Charles. The second, Dr. Thomas M. Logan, emigrated, after completing his medical education in Europe, also to Louisiana, and thence, in 1849, to California, where he is now sedulously engaged in practice in San Francisco. One of the grandsons, Dr. Thomas M. Logan, Jr., is practising his profession in Burnsville, near Selma, Alabama. The other, Dr. Samuel Logan, late Medical Director of General Beauregard's Staff, is also similarly engaged in New Orleans.

CALIFORNIA.

ELIAS SAMUEL COOPER was born near Somerville, Butler County, Ohio, in 1822. His collegiate medical course was commenced at

Cincinnati, Ohio, and his degree subsequently conferred by the University of St. Louis. At nineteen years of age he entered on the practice of medicine, at Dunville, Ill., and, after displaying here a rare talent for surgery, removed, at the age of twenty-two, to Peoria, Ill., which presented a larger field for his operations. Here he established an infirmary for the treatment of diseases of the eye and ear, and the removal of deformities of the lower extremities, especially club-foot. This soon brought him a crowd of patients, and his surgical reputation, especially as an oculist and orthopædist, extended into the adjacent States of Indiana, Kentucky, and Iowa, so that his practice became very lucrative.

In 1854 he visited Europe, and on his return in May, 1855, located in San Francisco. His purpose in removing to California was twofold; first, the improvement of his health, which had been shattered by a too uninterrupted application to business, and second, to find an ampler scope for the exercise of his surgical talent, with the ulterior object of establishing a medical school on the shores of the Pacific. Eighty medical men assembled in Sacramento on 12th March, 1856, and organized a "State Medical Society."

During the five year's existence of this association, so creditable to the profession in California, Dr. Cooper was foremost among those who took an active part in its sessions, and the published Transactions testify to his surgical genius and untiring zeal in the cause into which he had thrown all his energies. The love of the principles of his profession was a deep, all-absorbing, innate passion. In it he lived, thought, and found the whole happiness of his life.

About four years before his death, Dr. Cooper succeeded in the long-cherished object of his heart—the establishment of the medical department of the University of the Pacific, and occupied the chair of surgery. Although not possessed of any extraordinary gift of speaking, still, his earnest and impressive manner rendered him an effective and successful teacher. To subserve the interests of this institution he founded *The Medical Press*, which he conducted with ability to the day of his death.

But it was chiefly as an operator that Dr. Cooper was preeminent. A sure and steady hand, an imperturbable self-possession, and a quick sagacity to seize new indications, and employ at the instant the means of fulfilling them—these were the evidences of his genius for surgery. Among the achievements of his knife,

we can only mention a few of the more prominent operations. He twice performed the Cæsarean section—saving the life of the mother in both instances; the first now living in Illinois—the second in San Francisco. He twice ligated the arteria innominata: in one case the patient surviving forty-two days. He exsected the head of the os femoris four times, with favorable results; and once, two and a half inches of the shafts of the tibia and fibula, four inches from the lower end of the femur. In the latter instance, the joint was well reproduced, and the patient was enabled to walk with less than an inch of shortening. Whether it be owing to the benign influence of the climate, or to the innocuousness, as first promulgated by him, of cutting into large joints, Dr. Cooper never hesitated to lay them open, when he discovered suppurative disease in them, and always derived benefit from this procedure. The exsection of the tarsal and metatarsal, the carpal and metacarpal bones, was one of his most ordinary operations—recovery, with reproduction of the bone removed, occurring in almost every instance. In a case of complicated pharyngeal tumor he disarticulated, and removed a portion of the maxilla inferior with the parotid gland, and here too the joint was reproduced with full motion. His crowning operation, or the one which he regarded as the most difficult of his life, was the removal of a piece of iron an inch long and three-quarters of an inch thick, which, by the explosion of a gun-barrel, had been driven into the post cardiac region of the chest, and remained in close proximity to the heart over two months previous to the patient's applying to Dr. Cooper. Every physician who had seen the case discouraged an operation. Dr. Cooper operated, extracted the irritating metal, and the patient got well.

From the time he first arrived in California, Dr. Cooper had been troubled with neuralgic symptoms of the most serious and distressing character. About six months before his death, after suffering from a severe exacerbation, he was suddenly seized with amaurosis; on the same day, chronic spasms, and finally convulsions of the most violent character supervened. The convulsions were arrested by counter-irritation, conjoined with local depletion: the loss of vision, however, continued for several days. From this time his disease assumed a multiform character—sometimes appearing to be seated in one organ—sometimes in another, until death came at last to his relief.

His faithful biographer thus sums up his subject: "Dr. Cooper's great and leading characteristic was singleness of idea and con-

tinuity of purpose. The profession of medicine he loved, cultivated. and was devoted to with his entire and undivided mind. From the period in which he espoused it, and fully began his career, every energy of his genius was given to it, with an enthusiasm which nothing but the chilling hand of death could cool. It was this too intense devotion to his profession that has sacrificed him on its altar, at a period of his life when it could truly be said of him, that no man ever died with more unfinished work. Still, the brevity of his life is rendered more deserving of praise, from the fact that in it he has won an unfading chaplet of honor, which will give his name an enduring place among the illustrious dead of our profession."

BENJAMIN A. SHELDON was born in New York, on the 8th of September, 1825, and died in San Francisco on the 10th of September, 1864, thus closing his useful life at the early age of 39. He graduated at the Albany Medical College in the year 1847, and came to California in the capacity of surgeon to the steamship "Brother Jonathan" in 1852. At the time of his death he was creditably filling several important offices and posts of honor, viz., coroner of the city and county of San Francisco, having been re-elected for a second term through personal popularity, while every other candidate on the ticket was defeated; also Physician and Surgeon of the San Francisco Fire Department, and Surgeon General of the California State Militia, with the rank of Colonel on the Governor's Staff. During the existence of the State Medical Society, he served as Treasurer.

In the language of his pupil, Dr. C. A. Stivers, "as a physician, he stood high with the profession; as a friend, he was true as the sun; as a citizen, he was popular and valuable, and as a man, he was full of heart and charity."

BENJAMIN B. COIT died at San Francisco on the 16th of April, 1867, aged 66 years. The following obituary notice is condensed from the report of a committee of the Society of California Pioneers, detailed for that purpose:—

"Dr. Coit was born in Norwich, Connecticut, in the year 1801. His father was a shipmaster in the West India trade, and having acquired wealth, retired to private life, which he adorned by unceasing acts of benevolence among his fellow-citizens. The whole family, indeed, are venerated in their State for their elegant life and

liberal generosity. Under these auspices the material was ample for the early education of Dr. Coit, and his life has proved that he seized them with avidity, and embraced them with enthusiasm. He graduated with honors from the classic halls of Yale College, in 1822, and with no less distinction in 1826 from the time-honored University of Pennsylvania. He made New York his first field of medical practice, and it has been our rare privilege, so perishable is the record of the individual acts which unite to form a reputation, to have found well pressed in the memory of a friend, one of the first leaves which began the laurel-wreath gathered and worn in a life of professional success. A germ-fact is a characteristic trait of a lifetime, and we cite it as a pledge of ability which has never been fortified. In New York city, about the year 1840, a lady who moved in the best society was in her confinement. The family physician, a venerable gentleman of the old school, having made many ineffectual efforts to bring a happy result to a speedy conclusion, reluctantly and sorrowfully announced to the anxious husband and expectant father that an operation must be performed by which one life, at least, must be destroyed, in the hope that another more valuable life might be saved. The alarmed husband, seeking an alternative, summoned to his aid a young physician of prepossessing appearance, and who had recently opened an office in the neighborhood. The venerable physician retired indignant, but by the intervention of the young doctor, a child was soon born, and both mother and son survived. That mother has since given birth to many other children, and that boy, named Benjamin Coit, in gratitude by his parents, was some years ago a business man of San Francisco, and is now a prosperous merchant in New York.

"In later years an elegant service of silver, presented to Dr. Coit, by the Mayor of New York, testified the high opinion of the public authorities for his intelligent and devoted services in the benevolent institutions of that city. It was in New York that the marital destinies of Dr. Coit commenced. He was married to Miss Johnson, of a highly worthy family; and with a heart full of aspirations for pecuniary independence, which services of plate do not procure, he came to California. On the 6th of April, 1849, he arrived at San Francisco, on the P. A. Scranton. During his residence in California, the career of Dr. Coit was constantly marked by acts of benevolence. Even in 1849 we hear of his liberality in attending professionally the workmen of a printing establishment without charge. We hear the clergy praise his generosity.

We hear of his aid towards founding the Protestant Orphan Asylum, and everywhere we learn that he was the friend of the poor and suffering.

"A mind so liberally endowed as this must have engaged in some literary productions, but time has not allowed us to gather them. Their excellence is lauded, but, scattered in periodicals or without signature, they cannot now be identified. At his death, which occurred suddenly, he sank without a moment's warning, too quick to have suffered pain. Only a few days previously he had yielded his own bed to a sick acquaintance, and passed the night in his chair."

JOSEPH CAMILLE BADAROUS was born in the department of Lozere, South of France, 14th November, 1806. His diploma of physician and surgeon. from the Academy of Paris, bears date 13th August, 1830. In Paris, where the longest period of his professional life was passed, he married Mademoiselle Honorine de Rochefort, daughter of Count de Rochefort, who was at one time the intimate friend of his majesty, Louis Philippe. His second marriage was in New York, to Miss Elise Braderhouse, an orphan and ward of Sidney Brooks of that city. Besides being a most skilful occulist, Dr. Badarous was distinguished for his ability in obstetrics, and the diseases of women and children. His experience in this latter respect was derived from the situation he occupied for many years as "Médecin de la Crèche," or physician to the Institution for the Daily Reception and Care of Infants of Poor Working Women: one of those praiseworthy charities for which France is renowned, and which, of late years, the Empress Eugene has fostered and encouraged. He was also Medical Inspector of the Nurses of Paris. In 1849 Dr. Badarous came to America, and accepted an invitation to take charge of the Pacific Mail Steamship Cossack, at Panama. His health did not permit him to continue long at this insalubrious post; so, removing to San Francisco, he engaged actively in his profession until an attack of pneumonia, of two months' duration, closed his career, surrounded by a devoted family in his elegant home, on the 30th of May, 1867. "It requires," states his biographer, Dr. A. B. Stout, "more than a usual intimate acquaintance with this truly noble character, fully to appreciate its depth and its excellence. So modest and unobtrusive were his pretensions, and so simple and gentle his demeanor, that the enthusiasm which inspired his actions too often remained concealed with him; his

sense of duty was a religion; his charity for the poor was an exhaustless well of goodness: ask them, and you will believe."

ALEXANDER W. MCNAUGHTON died near San Francisco, on 7th of January, 1865, aged 46 years. He was born at Toronto, Canada, of Scotch parents, but having been reared from early youth, and educated in his profession in the State of New York, he was thereby imbued with Republican principles, and the strongest affection for the country under whose flag he lived and died. From the report of a special obituary committee of the Society of California Pioneers, of which Dr. McNaughton was a member, we condense the details of his life. After fulfilling the novitiate of his profession in Albany, New York, under the eye of his distinguished uncle, Dr. A. McNaughton, he passed around Cape Horn in a barque, landed in San Francisco September 20th, 1849, and, entering the service as Surgeon of the Pacific Mail Steamship Company, remained constant and unswerving from his duty until the end of a life, whose register is full paged with deeds of skill and kindness to suffering humanity.

HUMPHREY PEAKE died at his residence in Visalia, Cal., in the thirty-ninth year of his age. He was born and educated in Virginia, but pursued his profession, before emigrating to California, in the Mississippi Valley and in Texas. Here he acquired great experience in the treatment of that cachectic state of the system brought on by the persistent attacks of intermittent fever, endemic in that region. To meet the morbid indications thus constantly presented, he invented the following formula, which he named "pilulæ metalorum et amarum," and which he published in the medical periodicals of the day:—

℞.—Quiniæ sulph., ʒj;
Ferri redacti, ʒiss;
Strychniæ,
Acid. arseniosi, āā gr. iij;
Muc. G. acacia, q. s. ut ft. pil. No. lx.

These pills made his fortune. We here quote his own language: "I arrived in the valley of the Yazoo River an utter stranger. The malaria virulency of this region is scarce exceeded by the Maremma, the Pontine marshes, or any point noticed in the English expedition to Walcheren. There were there four other physicians, and two of

them (I mention their names with pleasure, Drs. J. W. Barnett and W. T. Leake) were, in my opinion, the best general practitioners I ever met. There was a large stock of their patients with chronic malarial poisoning, many of whom had infarctions of the spleen. Their history was the old story. They had tried everything, and still were sick. I prescribed my pill, and they got well. In less than three years the proceeds of my practice ran up to ten thousand dollars a year, and I attributed my success mainly to this pill." Dr. Peake's death was caused by swallowing a quantity of aqua ammonia through mistake for aqua calcis.

UNITED STATES ARMY.

T. G. MACKENZIE, born in Maryland, appointed assistant surgeon July 13th, 1862, to date from April 16th, 1862; served with the Army of the Potomac in the field and as Acting Assistant Medical Purveyor of that Army to August 13th, 1864. August 31st, 1864, on duty as Executive Officer First Division General Hospital, Alexandria, Va., and served in the General Hospitals of Alexandria, Va., to January, 1866, when he was assigned to the charge of Kalorama General Hospital, Washington, D. C., at which hospital he died January 1st, 1867, of congestion of the lungs.

Appointed major by brevet, to date March 13th, 1865, for faithful and meritorious services during the war.

J. P. PETHERBRIDGE was born in New Jersey, and appointed assistant surgeon May 1st, 1866, to date from February 28th, 1866. On duty at Carlisle Barracks, Pa., from July 6th, 1866, at which post he died February 23d, 1867, of typhoid fever. Served as surgeon, 65th New York Volunteers, from June 11th, 1862, to May 18th, 1864, when he was appointed assistant surgeon of volunteers; promoted surgeon of volunteers March 18th, 1865, and mustered out August 1st, 1865.

Appointed lieutenant-colonel of volunteers by brevet, to date March 13th, 1865, for faithful and meritorious services during the war.

R. O. ABBOTT, born in Pennsylvania, appointed assistant surgeon November 23d, 1849; promoted surgeon April 16th, 1862. On duty at Fort McHenry, Md., from date of appointment to Dec. 20th, 1849, when he was ordered to accompany Brevet Lieut.-Col.

Magruder's battery by sea to San Francisco, Cal.; arrived at San Francisco, Cal., August 11th, 1850; served on the Pacific coast to September 20th, 1855, when he was ordered to New York city. May 9th, 1856, on temporary duty at Fort Columbus, New York harbor. October 13th, 1856, ordered to accompany troops to Florida, and served there until July, 1857. November 25th, 1857, ordered to accompany troops to Texas, and served there until April 8th, 1861. June 4th, 1861, on duty in the medical purveyor's depot, New York city. July 24th, 1862, assigned to duty as medical director fifth army corps, army of the Potomac, and served as such until September 7th, 1862, when he was assigned to duty as acting medical director at Washington, and from February 2d, 1863, as medical director, department of Washington, to November 8th. 1866, when he received a leave of absence for the benefit of his health, and visited the West Indies. On his return he died at Brooklyn, N. Y., June 16th, 1867, from the effect of a carbuncle.

Appointed lieutenant colonel and colonel by brevet to date March 13th, 1865, for faithful and meritorious services during the war.

GEORGE M. MCGILL was born in Pennsylvania; appointed assistant surgeon July 3d, 1862, to date April 16th, 1862. On duty in general hospitals, Washington, D. C., until March, 1863, when he was assigned to the army of the Potomac; served with the First U. S. Cavalry, afterwards as acting medical director of the cavalry corps and acting medical inspector of that army; January, 1865, assigned to hospital duty at Baltimore, Maryland; July, 1866, assigned to duty at Hart's Island, New York harbor, during the outbreak of cholera at that post, and afterwards served at David's Island, New York harbor. April 24th, 1867, assigned to duty in the department of the Missouri, and in June, 1867, ordered to accompany two companies of the 38th U. S. infantry to New Mexico, and while en route to New Mexico, died, July 20th, 1867, near Old Fort Lyon, C. T., of cholera.

Appointed captain by brevet, to date May 12th, 1864, for gallant and meritorious services at the battle of Meadow Bridge, Virginia. Major by brevet to date March 13th, 1865, for faithful and meritorious services during the war. Lieutenant-colonel to date September 28th, 1866, for meritorious and distinguished services at Hart's Island, where cholera prevailed. Colonel to date June 20th, 1867,

for faithful and meritorious services in the medical department during the prevalence of cholera near Fort Harker, Kansas.

GEORGE TAYLOR, born in Maryland; appointed assistant surgeon, April 1st, 1856; promoted surgeon August 27th, 1862. On duty in Texas from date of appointment to February, 1859. May 20th, 1859, ordered to accompany recruits to Utah. September 16th, 1859, assigned to duty at Fort Bridger, U. T. August 12th, 1861, on duty with Utah forces at Fort Laramie, D. T. November 2d, 1861, in charge of Adams' House General Hospital, Baltimore, Md. July 12th, 1862, assigned to duty in the army of the Potomac and on duty as medical director third army corps. November 30th, 1862, on duty in charge of general hospitals, Newark, N. J. August 27th, 1864, relieved from duty at Newark, N. J., and assigned to duty with the army of the Potomac. September 10th, 1864, on duty in the army of the Potomac. October 11th, 1864, medical director ninth army corps. March 25th, 1865, relieved as medical director, ninth army corps, army of the Potomac. June 30th, 1865, assigned to duty at Milwaukee, Wis. August 7th, 1866, relieved from duty at Milwaukee, Wis., and assigned to duty in Texas. October 10th, 1866, on duty as Chief Medical Officer, District of Texas, Galveston, Texas. August 5th, 1867, died of yellow fever, at Galveston, Texas.

Appointed lieutenant-colonel by brevet, to date March 13th, 1865, for faithful and meritorious services during the war.

C. H. ROWE, born in Connecticut. May 1st, 1866, appointed assistant surgeon, to date February 28th, 1866. On duty at Fort Columbus, Hart's and David's Islands, New York harbor, to October 20th, 1866. October 31st, 1866, on duty at Galveston, Texas, at which place he died September 5th, 1867, of yellow fever.

J. SIM SMITH, born in Virginia. Appointed assistant surgeon May 28th, 1861. On duty at Fort Monroe, Pa., with the army of the Potomac to October 21st, 1862, when he was assigned to duty at Bedloe's Island, New York harbor, in temporary charge of McDougall General Hospital; Fort Schuyler, New York harbor, and in charge of De Camp General Hospital, New York harbor, from November 12th, 1863, to February 8th, 1864 (on temporary duty in the department of the South from September 7th to November 11th, 1863). February 27th, 1864, on duty with the army of the

Potomac, and served as surgeon-in-chief, second division, fifth corps, operating surgeon at White House, medical director of transportation, acting chief medical officer at City Point, Pa., in the medical purveyor's office; and at the head-quarters, army of the Potomac. July 1st, 1865, on duty at Artillery Camp near Washington, D. C. October 31st, 1865, assigned to duty with Fifth U. S. cavalry, Washington, D. C. July 31st, 1867, on duty as post-surgeon at Fort Jefferson, Tortugas, Fla., at which place he died, September 8th, 1867, of yellow fever.

Appointed major by brevet, for faithful and meritorious services during the war, to date from March 13th, 1865.

SAMUEL ADAMS, born in Maine; appointed assistant surgeon, April 16th, 1862; served with Sykes' division, army of the Potomac, 1st U. S. cavalry and 8th U. S. infantry, from July 13th, 1862, to August 28th, 1863.

September 1st, 1863, to May 2d, 1864, on duty with Surgeon-General Hammond. June 1st, 1864, assigned to duty as medical inspector 9th army corps, army of the Potomac. August 31st, 1865, assigned to duty at Fort Adams, Rhode Island, and on duty there to April, 1867, when he was assigned to duty in Texas, and died at Galveston, Texas, September 9th, 1864, of yellow fever.

Appointed captain by brevet for gallant and meritorious services in front of Petersburg, Virginia, and major by brevet for faithful and meritorious services during the war, to date March 13th, 1865.

T. M. GETTY, born in Maryland; appointed assistant-surgeon November 23d, 1849; promoted surgeon April 16th, 1862. On duty in Texas from date of appointment to October 25th, 1854. November 22d, 1854, on duty in Baltimore, Maryland. August 11th, 1855, on duty at Fort Laramie, D. T., and in the field with the Sioux expedition. April 24th, 1858, to accompany troops to Utah, and served at Camp Bridger, and Camp Floyd, U. T., to May 20th, 1860. Served in New Mexico and Texas, from that date to January 30th, 1861. April 19th, 1861, ordered to report to the surgeon-general, and assigned to duty in the department at Washington. July 31st, 1861, assigned to duty at St. Louis, Mo., and engaged in establishing general hospitals there, and assisting the medical director, department of the West, and on duty at the arsenal, St. Louis. June 8th, 1862, on duty in charge of general hospital, Annapolis, Maryland. October 6th, 1862, on duty as

medical director, 2d army corps, army of the Potomac, Yorktown, Virginia. May 24th, 1863, relieved from duty as medical director, 2d army corps, and assigned to duty as medical director, department of the Northwest. August 10th, 1864, relieved from duty as medical director, department of the Northwest, and assigned to duty with the commissary-general of prisoners, as acting medical inspector. February 10th, 1865, relieved from duty with the commissary-general of prisoners, and assigned to duty in the middle military department. August 25th, 1865, assigned to duty as medical director, department of Alabama, Mobile, Alabama. June 4th, 1866, medical director, department of the South, Macon, Georgia. March 27th, 1867, medical director 3d military district. May 1st, 1867, relieved from duty as medical director, 3d military district, and assigned to duty as post-surgeon, Fort McHenry, Maryland, at which post he died, October 30th, 1867, of gastritis.

Appointed lieutenant-colonel by brevet, to date March 13th, 1865, for faithful and meritorious services during the war.

P. G. S. Ten Broeck, born in Maine; appointed assistant-surgeon December 13th, 1847. Promoted surgeon May 21st, 1861. Served in the war with Mexico from date of appointment to June, 1848. August, 1848, on duty in Texas and New Mexico, to October 1852. December 1st, 1852, on duty at Fort Preble, Maine. April 16th, 1853, on duty at Fort Wood, Bedloe's Island, New York harbor. October 18th, 1853, on duty at Fort Independence, Boston harbor. February 15th, 1854, assigned to temporary duty at Fort Adams, Rhode Island. March 17th, 1854, ordered to accompany troops to California, and served on the Pacific coast from May, 1854, to March, 1860, and on leave of absence from May 19th, 1860, to February, 1861. February 1861, on duty at Fort Wood, Bedloe's Island, New York harbor. June 5th, 1861, assigned to duty with Major-General Patterson, commanding department of Pennsylvania. July 13th, 1861, assigned to duty as member of medical examining board, Washington, D. C. May 7th, 1862, relieved from duty in Washington, D. C., and assigned to duty as medical director and purveyor, department of California. June 17th, 1862, on duty as medical director and purveyor, department of California, San Francisco, California. June 26th, 1865, on duty at Fort Vancouver, W. T., as medical director, department of the Columbia, having been relieved from duty as medical director and purveyor, department

of California, in May, 1865. June 24th, 1867, relieved from duty as medical director, department of the Columbia, and ordered to New York city. August 27th, 1867, assigned to duty at Fort Preble, Maine, at which post he died December 19th, 1867, of erysipelas.

Appointed lieutenant-colonel by brevet, to date March 13th, 1865, for faithful and meritorious services during the war.

UNITED STATES NAVY.

J. WILSON KELLOGG, Fleet Surgeon U. S. N., died at Montevideo, S. A., January 7, 1867.

H. F. MCSHERRY, Surgeon U. S. N., received his appointment on 23d of June, 1860; was promoted on 22d September, 1863; died on U. S. S. Wyoming, of phthisis pulmonalis, October 1, 1867.

JOHN D. MURPHY, Assistant Surgeon U. S. N., appointed 24th January, 1862; promoted March 6, 1866; and died of yellow fever, at the naval hospital, Pensacola, Florida, October 26, 1867.

CHARLES H. PAGE, Assistant Surgeon U. S. N., appointed September 22, 1863, and died of phthisis pulmonalis, on U. S. S. Hartford, on 24th December, 1867.

AUGUSTUS J. PICK, appointed Assistant Surgeon February 25, 1867, died at naval hospital, Pensacola, of yellow fever, August 29, 1867.

INDIANA.

JOHN W. MOODY was born at Shippensburg, Pennsylvania, completed his academic course in Washington College, and entered at once earnestly upon the study of medicine. He located in Greensbury, Ind., in 1839, and continued here until his death, engaged in a large and laborious practice. Dr. Moody died from the effects of sunstroke, on the 16th of August, 1867.

Since the year 1861, he was one of the Commissioners of the Indiana Hospital for the Insane, acquitting himself of his duties in the most creditable manner. Dr. Kemper, at the close of an obituary notice of the deceased, thus remarks:—

"It has been said that 'The place for man to die, is where he dies for man.' To receive into his own breast the arrow aimed at his patient, should be the highest ambition of the true physician. We admire the man who falls at his post—physician as well as soldier. Dr. Moody was faithful to his trust. At the close of his life he could look back on a brilliant career spent in alleviating the ills and sufferings of his fellow-men, a life of self-denial, toil, and sacrifice. The blessings of those he labored for shall be his reward. Sir Walter Scott beautifully expresses the sentiment in the story of the 'Heart of Mid-Lothian,' where Effie Deans is condemned to death, and her sister personally pleads with the Queen for her life: 'Oh! my leddy, when the hour o' trouble comes, that comes to mind and body, and the hour o' death comes, that comes to high and low, it is na' what we ha' done for oursel's, but what we ha' done for others, that we think on most pleasantly.'"

JOHN T. FLOYD, of Noblesville, Indiana, graduated March, 1866, died June 20, 1867. Dr. F. is referred to as an excellent young man, faithful in the discharge of his duties, and of much promise as a practitioner.

PLAN OF ORGANIZATION

FOR A

NATIONAL MEDICAL ASSOCIATION.

PLAN OF ORGANIZATION

FOR A

NATIONAL MEDICAL ASSOCIATION.

Whereas, The Medical Convention, held in the city of New York, in May, 1846, have declared it expedient "for the medical profession of the United States to institute a National Medical Association;" and,

Inasmuch as an institution so conducted as to give frequent, united, and emphatic expression to the views and aims of the medical profession in this country, must, at all times, have a beneficial influence, and supply more efficient means than have hitherto been available here for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor, and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities, and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it: therefore,

Be it resolved, In behalf of the medical profession of the United States—that the members of the Medical Convention, held in Philadelphia, in May, 1847, and all others who, in pursuit of the objects above mentioned, are to unite with, or succeed them, constitute a National Medical Association; and that, for the organization and management of the same, they adopt the following *Regulations*.

I.—TITLE OF THE ASSOCIATION.

This institution shall be known and distinguished by the name and title of "The American Medical Association."

II.—MEMBERS.

The members of this institution shall collectively represent and have cognizance of the common interests of the medical profession in every part of the United States; and shall hold their appointment to membership either as delegates from local institutions, as members by invitation, or as permanent members.

The *Delegates* shall receive their appointment from permanently organized medical societies, medical colleges, hospitals, lunatic asylums, and other permanently organized medical institutions of good standing in the United States, and from the American Medical Society of Paris.

Each delegate shall hold his appointment for one year, and until another is appointed to succeed him, and shall participate in all the business and affairs of the Association.

Each local society shall have the privilege of sending to the Association one delegate for every ten of its regular resident members, and one for every additional fraction of more than half this number. The faculty of every regularly constituted medical college or chartered school of medicine shall have the privilege of sending two delegates. The professional staff of every chartered or municipal hospital, containing a hundred inmates or more, shall have the privilege of sending two delegates; and every other permanently organized medical institution of good standing shall have the privilege of sending one delegate.

No individual who shall be under sentence of expulsion or suspension from any State or local medical society of which he may have been a member, shall be received as a delegate to this Association, or be allowed any of the privileges of a member, until he shall have been relieved from the said sentence by such State or local society.

No one expelled from this Association shall at any time thereafter be received as a delegate or member, unless by a three-fourths vote of the members present at the meeting to which he is sent, or at which he is proposed.

Members by Invitation shall consist of practitioners of reputable standing from sections of the United States not otherwise represented at the meeting. They shall receive their appointment by invitation of the meeting, after an introduction from, and being vouched for by, any of the members present, or any of the absent permanent members. They shall hold their connection with the

Association until the close of the annual session at which they are received; and shall be entitled to participate in all its affairs, as in the case of delegates.

The *Permanent Members* shall consist of all those who have served in the capacity of delegates, and of such other members as may receive the appointment by unanimous vote, and shall continue such so long as they remain in good standing in the body from which they were sent as delegates. Permanent members shall at all times be entitled to attend the meetings, and participate in the affairs of the Association, so long as they shall continue to conform to its regulations, but without the right of voting; and, when not in attendance, they shall be authorized to grant letters of introduction to reputable practitioners of medicine residing in their vicinity, who may wish to participate in the business of the meeting, as provided for members by invitation.

Every member elect, prior to the permanent organization of the annual meeting, or before voting on any question after the meeting has been organized, must sign these regulations, inscribing his name and address in full, specifying in what capacity he attends, and, if a delegate, the title of the institution from which he has received his appointment.

III.—MEETINGS.

The regular meetings of the Association shall be held annually, and commence on the first Tuesday in May or first Tuesday in June. The place of meeting shall never be the same for any two years in succession, and shall be determined, with the time of meeting for each next successive year, by vote of the Association.

IV.—OFFICERS.

The officers of the Association shall be a President, four Vice-Presidents, one Permanent and one Assistant Secretary, and a Treasurer. They shall be nominated by a special committee of one member from each State represented at the meeting, and shall be elected by vote on a general ticket.

Each officer, except the Permanent Secretary, shall hold his appointment for one year, and until another is elected to succeed him. The Permanent Secretary shall hold his appointment until removed by death, resignation, or a vote of two-thirds of the members present at a regular annual meeting.

The President and Vice-Presidents shall assume the functions of their respective offices at the beginning of the annual meeting next succeeding their election; all other officers shall enter upon their duties immediately after their election.

The President shall preside at the meetings, preserve order and decorum in debate, give a casting vote when necessary, and perform all the other duties that custom and parliamentary usage may require.

The Vice-Presidents, when called upon, shall assist the President in the performance of his duties, and during the absence, or at the request of the President, one of them shall officiate in his place.

The Permanent Secretary shall record the minutes and authenticate the proceedings; give due notice of the time and place of each next ensuing annual meeting; notify all members of committees of their appointment, and of the duties assigned to them; hold correspondence with other permanently organized medical societies, both domestic and foreign; serve as a member of the Committee of Publication; see that the published *Transactions* are promptly distributed to all the members who have paid the annual assessment, and carefully preserve the archives and unpublished transactions of the Association.

The Assistant Secretary shall aid the Permanent Secretary in recording and authenticating the proceedings of the Association; serve as a member of the Committee of Arrangements, and perform all the duties of Permanent Secretary temporarily, whenever that office shall be vacant, either by death, resignation, or removal.

The Treasurer shall have the immediate charge and management of the funds and property of the Association. He shall be a member of the Committee of Publication, to which committee he shall give bonds for the safe keeping and proper use and disposal of his trust. And through the same committee he shall present his accounts, duly authenticated, at every regular meeting.

V.—STANDING COMMITTEES.

The following standing committees, each composed of seven members, shall be organized at every annual meeting, for preparing, arranging, and expediting business for each next ensuing year, and for carrying into effect the orders of the Association not otherwise assigned, namely, a Committee of Arrangements and a Committee of Publication.

The Committee of Arrangements shall, if no sufficient reasons pre-

vent, be mainly composed of seven members residing in the place at which the Association is to hold its next annual meeting; and shall be required to provide suitable accommodations for the meeting, to verify and report upon the credentials of membership, to receive and announce all essays and memoirs voluntarily communicated, either by members of the Association, or by others through them, and to determine the order in which such papers are to be read and considered.

The Committee of Publication, of which the Secretaries and Treasurer must constitute a part, shall have charge of preparing for the press, and of publishing and distributing such of the proceedings, transactions, and memoirs of the Association as may be ordered to be published. The six members of this Committee, who have not the immediate management of the funds, shall also in their own names as agents for the Association, hold the bond of the Treasurer for the faithful execution of his office, and shall annually audit and authenticate his accounts, and present a statement of the same in the annual report of the Committee; which report shall specify the character and cost of the publications of the Association during the year, the number of copies still at the disposal of the meeting, the funds on hand for further operations, and the probable amount of the assessment to be laid on each member of the Association for covering its annual expenditures.

VI.—FUNDS AND APPROPRIATIONS.

Funds shall be raised by the Association for meeting its current expenses and awards from year to year, but never with the view of creating a permanent income from investments. Funds may be obtained by an equal assessment of not more than five dollars annually, on each of the members; by individual voluntary contributions for specific objects; and by the sale and disposal of publications, or of works prepared for publication.

The funds may be appropriated for defraying the expenses of the annual meetings, including the necessary expenses of the Permanent Secretary in maintaining the necessary correspondence of the Association; for publishing the proceedings, memoirs, and transactions of the Association; for enabling the Standing Committees to fulfil their respective duties, conduct their correspondence, and procure the materials necessary for the completion of their stated annual reports; for the encouragement of scientific investigation by prizes and awards of merit; and for defraying

the expenses incidental to specific investigations under the instruction of the Association, where such investigations have been accompanied with an order on the Treasurer to supply the funds necessary for carrying them into effect.

VII.—PROVISION FOR AMENDMENT.

No amendment or alteration shall be made in any of these articles, except at the annual meeting next subsequent to that at which such amendment or alteration may have been proposed; and then only by the voice of three-fourths of all the members in attendance.

And, in acknowledgment of having adopted the foregoing propositions, and of our willingness to abide by them, and use our endeavors to carry into effect the objects of this Association as above set forth, we have hereunto affixed our names.

NAMES OF MEMBERS.	RESIDENCE.	INSTITUTION REPRESENTED.

BY-LAWS.

I.—ORDER OF BUSINESS.

The order of business at the annual meetings of the American Medical Association shall at all times be subject to the vote of three-fourths of all the members in attendance; and, until permanently altered, except when for a time suspended, it shall be as follows, viz:—

1st. The calling of the meeting to order by the President elected the preceding year, or, in his absence, by one of the Vice Presidents.

2d. The report of the Committee of Arrangements on the credentials of members, after the latter have registered their names and addresses, and the titles of the institutions which they represent.

3d. The reception of members by invitation.

4th. The election of permanent members.

5th. The reading of notes from absentees.

6th. The hearing of the annual address of the President.

7th. The reception of the reports of all special committees and voluntary communications, and their reference to the appropriate Sections.

8th. The appointment of the committee of one from each State represented, to nominate officers of the Association, and to fill the standing committees.

9th. The reading and consideration of the reports of the Standing Committees of Publication; on Medical Education; on Medical Literature; and on Prize Essays.

10th. Resolutions introducing new business, and instructions to the permanent committees.

11th. The selection of the next place of meeting.

12th. The report of the Nominating Committee, and the election of officers of the Association.

13th. Reports from the several Sections.

14th. Reading of the minutes by the Secretary.

15th. Unfinished and miscellaneous business.

16th. Adjournment.

II.—SECTIONS.

The general meetings of the Association shall be restricted to the morning sessions; and the afternoon sessions, commencing at three o'clock, shall be devoted to the hearing of reports and papers, and their consideration, in the following *Sections*:—

1. Chemistry and Materia Medica.
2. Practical Medicine and Obstetrics.
3. Surgery and Anatomy.
4. Meteorology, Medical Topography, and Epidemic Diseases.
5. Medical Jurisprudence, Hygiene, and Physiology.
6. Psychology.

Each Section shall choose its own officers, and make its own rules of order.

All essays, voluntary communications, and reports, except those of the officers of the Association, and those of the Committees of Publication, on Medical Education, Medical Literature, and Prize Essays, shall first be presented to the Association by a brief abstract, and referred to the appropriate Sections, in which they shall be examined and discussed, after which they shall be returned to the Permanent Secretary of the Association, accompanied by an expression of opinion as to whether they are worthy of publication

or not. And the Secretary shall pass all such as are thus designated to be worthy, directly to the Committee of Publication; and such as are not so designated shall be retained by the Secretary, or returned to their authors, as the latter may indicate.

III.—STANDING COMMITTEES.

The following are the Standing Committees of the Association, to be filled by the Committee on Nominations, and to report at the next annual meeting subsequent to their appointment, viz: Committee of Arrangements; Committee of Publication; Committee on Prize Essays; Committee on Medical Education; Committee on Medical Literature; Committee on Climatology and Epidemic Diseases; and Committee on American Medical Necrology.

The *Committee of Publication* shall append to each volume of the *Transactions* hereafter published, a copy of the Constitution, By-Laws, and Code of Ethics of the Association. It shall print conspicuously, at the beginning of each volume of the *Transactions*, the following disclaimer, viz: The American Medical Association, although formally accepting and publishing the reports of the various standing committees, holds itself wholly irresponsible for the opinions, theories, or criticisms therein contained, except when otherwise decided by special resolution. It shall be the duty of the same Committee to fix the price at which the printed *Transactions* of each session will be furnished to others than delegates and members; provided that in no case shall the said price be less than three dollars. And it shall have power to furnish the chairmen of committees on epidemics with extra copies of their reports, respectively, at the expense of the Association—the said extra copies not to exceed one hundred.

The *Committee on Prize Essays* shall consist of five members, residing in the same neighborhood, whose duty it shall be, in the interval between the present and the next succeeding annual sessions, to receive papers upon any subject, from any persons who may choose to send them; to decide upon the merits of these papers, and to select for presentation to the Association, at its next session, such as they may deem worthy of being thus presented. The Committee shall have power to form such regulations as to the mode in which the papers are to be presented, and as to the observing of secrecy, as they may think proper; and also to award two prizes of one hundred dollars each, to the best two volunteer communications reported on favorably by them, and directed by the Association to be published.

The *Committees on Medical Education* and *Medical Literature* shall consist of five members each, to be appointed annually.

The *Committee on Climatology* and *Epidemic Diseases* shall consist of one member for each State and Territory represented in the Association, whose duty it shall be to report upon its medical topography, epidemic diseases, and the most successful treatment thereof, and the same shall continue to hold their office for three years.

The *Committee on American Medical Necrology* shall consist of one member for each State represented in the Association, whose duty it shall be to procure memorials of the eminent and worthy dead among the distinguished physicians of our country, and present them to this Association for publication in their *Transactions.*

IV.—THE PUBLICATION OF PAPERS AND REPORTS.

No report or other paper shall be entitled to publication in the volume for the year in which it shall be presented to the Association, unless it be placed in the hands of the Committee of Publication on or before the first day of July. It must also be so prepared as to require no material alteration or addition at the hands of its author.

Authors of papers are required to return their proofs within two weeks after their reception; otherwise they will be passed over and omitted from the volume.

Every paper received by this Association and ordered to be published, and all plates or other means of illustration, shall be considered the exclusive property of the Association, and shall be published and sold for the exclusive benefit of the Association.

V.—ASSESSMENTS.

The sum of five dollars shall be assessed, annually, upon each delegate to the sessions of the Association, as well as upon each of its permanent members, whether attending or not, for the purpose of raising a fund to defray the necessary expenses of the Association, and for printing the *Transactions.* The payment of this sum shall be required of the delegates and members in attendance upon the sessions of the Association previously to their taking their seats and participating in the business of the sessions. Permanent members, not attending, shall forward their yearly dues to the Treasurer, and thereby shall be entitled to receive a copy of the printed *Transactions*, the same as delegates.

VI.—DELEGATES FROM THE MEDICAL STAFFS OF THE ARMY AND NAVY.

Delegates representing the medical staffs of the United States Army and Navy, shall be appointed by the Chiefs of the Army and Navy Medical Bureaus. The number of delegates so appointed shall be four from the army medical officers, and an equal number from the navy medical officers.

VII.—DELEGATES TO FOREIGN MEDICAL SOCIETIES.

The President shall be authorized annually to appoint delegates to represent this Association at the meetings of the British Medical Association, the American Medical Society at Paris, and such other scientific bodies in Europe as may be affiliated with us.

VIII.—DUTIES OF MEMBERS.

No one shall be permitted to address the Association, except he shall have first given his name and residence, which shall be distinctly announced from the chair, and the member may be required to go forward and speak from the stand, but not more than ten minutes at one time.

No one appointed on a special committee, who fails to report at the meeting next succeeding the one at which he is appointed, shall be continued on such committee, or appointed on any other, unless a satisfactory excuse is offered.

It shall be the duty of every member of this Association, who learns that any existing medical school departs from the published conditions of graduation, to report the fact at the annual meetings; and, on proof of the fact, such school shall be deprived of its representation in this body.

IX.—CONDITION EXCLUDING REPRESENTATION.

No State or Local Medical Society, or other organized institution, shall be entitled to representation in this Association that has not adopted its Code of Ethics; or that has intentionally violated or disregarded any article or clause of the same.

This Association recognizes as a "regular organized" medical college, one that has been represented at any meeting, and that complies with the rules and directions found in the published *Transactions*, vol. xiii. page 33.

ORDINANCES.

Resolved, That the several Sections of this Association be requested, in the future, to refer no papers or reports to the Committee of Publication, except such as can be fairly classed under one of the three following heads, viz: 1st. Such as may contain and establish *positively* new facts, modes of practice, or principles of real value. 2d. Such as may contain the results of well-devised original experimental researches. 3d. Such as present so complete a review of the facts on any particular subject as to enable the writer to deduce therefrom legitimate conclusions of importance.

Resolved, That the several sections be requested, in the future, to refer all such papers as may be presented to them for examination by this Association, that contain matter of more or less value, and yet cannot be fairly ranked under either of the heads mentioned in the foregoing resolution, back to their authors with the recommendation that they be published in such regular medical periodicals as said authors may select, with the privilege of placing at the head of such papers, "Read to the Section of the American Medical Association on the day of 18 ." (Vide *Transactions*, vol. xvi. p. 40.)

Resolved, That the Association shall send annually a delegate to the "Association of Medical Superintendents of Insane Asylums," one of whose duties it shall be to urge upon that Association the advantage, for all purposes of science, of a more intimate union with this Association. (Vide *Transactions*, vol. xvi. p. 41.)

Resolved, That, instead of yearly reprinting the list of members of the American Medical Association, the Committee of Publication be instructed to prepare and print in the *Transactions* an alphabetical catalogue triennially, containing a complete list of the Permanent Members, with their names in full, designating their residences, the year of their admission, the offices they may have held in the Association, and, in case of death or rejection, the date thereof. (Vide *Transactions*, vol. xvii. p. 33.)

Resolved, That no report or other paper shall be presented to this Association unless it be so prepared that it can be put at once into the hands of the Permanent Secretary, to be transmitted to the Committee of Publication. (Vide *Transactions*, vol. xvii. p. 27.)

Resolved, That the next Annual Meeting of the American Medical Association shall be held in the City of Washington, on the first Tuesday in May, 1868, and every second year thereafter, until otherwise ordered by the Association.

Resolved, That whenever the Association shall meet in the City of Washington, as directed by the above resolution, the Committee of Arrangements be strictly forbidden either to provide themselves, or accept provision by others, of any entertainment or excursion whatever, which will conflict with the regular business of the body or its Sections. (Vide *Transactions*, vol. xviii. p. 35.)

Resolved, That the Permanent Secretary hereafter and from this date be authorized to draw a warrant upon the Treasurer for the expenses incurred in his attendance upon each session of the Association, and that the Treasurer is hereby instructed to pay the same. (Vide *Transactions*, vol. xviii. p. 42.)

Resolved, That the faculties of the several medical colleges of the United States be recommended to announce explicitly in their annual commencement circulars and advertisements that they will not receive certificates of time of study from irregular practitioners, and that they will not confer the degree upon any one who may acknowledge his intention to practise in accordance with any exclusive system. (Vide *Transactions*, vol. xix. p. 31.)

Resolved, That there be added to the Committee of Arrangements a Sub-Committee of Arrangements in each of our large cities, consisting of three members, whose duty it shall be to obtain, if practicable, a reduction of fare upon the routes of travel for the delegates from their city and vicinity who attend the meeting of the Association.

On motion, the Permanent Secretary was empowered to make the appointments on said committees. (Vide *Transactions*, vol. xix. p. 39.)

Resolved, That a standing committee of one be appointed upon the whole subject of vaccination, to report from time to time on such topics connected with it as shall, in the estimation of said committee, appear of chief practical interest and importance to the profession. (Vide *Transactions*, vol. xix. p. 40.)

Resolved, That those gentlemen who desire to report on special subjects, and will pledge themselves to report at the next meeting, be requested to send their names, and the subjects on which they desire to report, to the Permanent Secretary. (Vide *Transactions*, vol. xix. p. 42.)

Resolved, That hereafter the necessary expenses for rent of hall for general meetings and rooms for sections to accommodate the annual meetings, and the necessary expenses for cards of membership, be paid out of the treasury of the Association. (Vide *Transactions*, vol. xix. p. 42.)

CODE OF ETHICS

OF THE

AMERICAN MEDICAL ASSOCIATION,

ADOPTED MAY, 1847.

CODE OF MEDICAL ETHICS.

OF THE DUTIES OF PHYSICIANS TO THEIR PATIENTS, AND OF THE OBLIGATIONS OF PATIENTS TO THEIR PHYSICIANS.

ART. I.—*Duties of physicians to their patients.*

§ 1. A physician should not only be ever ready to obey the calls of the sick, but his mind ought also to be imbued with the greatness of his mission, and the responsibility he habitually incurs in its discharge. These obligations are the more deep and enduring, because there is no tribunal other than his own conscience to adjudge penalties for carelessness or neglect. Physicians should, therefore, minister to the sick with due impressions of the importance of their office; reflecting that the ease, the health, and the lives of those committed to their charge, depend on their skill, attention, and fidelity. They should study, also, in their deportment, so to unite *tenderness* with *firmness*, and *condescension* with *authority*, as to inspire the minds of their patients with gratitude, respect, and confidence.

§ 2. Every case committed to the charge of a physician should be treated with attention, steadiness, and humanity. Reasonable indulgence should be granted to the mental imbecility and caprices of the sick. Secrecy and delicacy, when required by peculiar circumstances, should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted in their professional visits, should be used with discretion, and with the most scrupulous regard to fidelity and honor. The obligation of secrecy extends beyond the period of professional services;—none of the privacies of personal and domestic life, no infirmity of disposition or flaw of character observed during professional attendance should ever be divulged by the physician except when he is imperatively required to do so. The force and necessity of this

obligation are indeed so great, that professional men have, under certain circumstances, been protected in their observance of secrecy by courts of justice.

§ 3. Frequent visits to the sick are in general requisite, since they enable the physician to arrive at a more perfect knowledge of the disease—to meet promptly every change which may occur, and also tend to preserve the confidence of the patient. But unnecessary visits are to be avoided, as they give useless anxiety to the patient, tend to diminish the authority of the physician, and render him liable to be suspected of interested motives.

§ 4. A physician should not be forward to make gloomy prognostications, because they savor of empiricism, by magnifying the importance of his services in the treatment or cure of the disease. But he should not fail, on proper occasions, to give to the friends of the patient timely notice of danger when it really occurs; and even to the patient himself, if absolutely necessary. This office, however, is so peculiarly alarming when executed by him, that it ought to be declined whenever it can be assigned to any other person of sufficient judgment and delicacy. For, the physician should be the minister of hope and comfort to the sick; that, by such cordials to the drooping spirit, he may smooth the bed of death, revive expiring life, and counteract the depressing influence of those maladies which often disturb the tranquillity of the most resigned in their last moments. The life of a sick person can be shortened not only by the acts, but also by the words or the manner of a physician. It is, therefore, a sacred duty to guard himself carefully in this respect, and to avoid all things which have a tendency to discourage the patient and to depress his spirits.

§ 5. A physician ought not to abandon a patient because the case is deemed incurable; for his attendance may continue to be highly useful to the patient, and comforting to the relatives around him, even in the last period of a fatal malady, by alleviating pain and other symptoms, and by soothing mental anguish. To decline attendance, under such circumstances, would be sacrificing to fanciful delicacy and mistaken liberality, that moral duty, which is independent of, and far superior to, all pecuniary consideration.

§ 6. Consultations should be promoted in difficult or protracted cases, as they give rise to confidence, energy, and more enlarged views in practice.

§ 7. The opportunity which a physician not unfrequently enjoys of promoting and strengthening the good resolutions of his patients, suffering under the consequences of vicious conduct, ought never

to be neglected. His counsels, or even remonstrances, will give satisfaction, not offence, if they be proffered with politeness, and evince a genuine love of virtue, accompanied by a sincere interest in the welfare of the person to whom they are addressed.

ART. II.—*Obligations of patients to their physicians.*

§ 1. The members of the medical profession, upon whom is enjoined the performance of so many important and arduous duties towards the community, and who are required to make so many sacrifices of comfort, ease, and health, for the welfare of those who avail themselves of their services, certainly have a right to expect and require, that their patients should entertain a just sense of the duties which they owe to their medical attendants.

§ 2. The first duty of a patient is to select as his medical adviser one who has received a regular professional education. In no trade or occupation, do mankind rely on the skill of an untaught artist; and in medicine, confessedly the most difficult and intricate of the sciences, the world ought not to suppose that knowledge is intuitive.

§ 3. Patients should prefer a physician whose habits of life are regular, and who is not devoted to company, pleasure, or to any pursuit incompatible with his professional obligations. A patient should, also, confide the care of himself and family, as much as possible, to one physician; for a medical man who has become acquainted with the peculiarities of constitution, habits, and predispositions of those he attends, is more likely to be successful in his treatment than one who does not possess that knowledge.

A patient who has thus selected his physician, should always apply for advice in what may appear to him trivial cases, for the most fatal results often supervene on the slightest accidents. It is of still more importance that he should apply for assistance in the forming stage of violent diseases; it is to a neglect of this precept that medicine owes much of the uncertainty and imperfection with which it has been reproached.

§ 4. Patients should faithfully and unreservedly communicate to their physician the supposed cause of their disease. This is the more important, as many diseases of a mental origin simulate those depending on external causes, and yet are only to be cured by ministering to the mind diseased. A patient should never be afraid of thus making his physician his friend and adviser; he

should always bear in mind that a medical man is under the strongest obligations of secrecy. Even the female sex should never allow feelings of shame or delicacy to prevent their disclosing the seat, symptoms, and causes of complaints peculiar to them. However commendable a modest reserve may be in the common occurrences of life, its strict observance in medicine is often attended with the most serious consequences, and a patient may sink under a painful and loathsome disease, which might have been readily prevented had timely intimation been given to the physician.

§ 5. A patient should never weary his physician with a tedious detail of events or matters not appertaining to his disease. Even as relates to his actual symptoms, he will convey much more real information by giving clear answers to interrogatories, than by the most minute account of his own framing. Neither should he obtrude upon his physician the details of his business nor the history of his family concerns.

§ 6. The obedience of a patient to the prescriptions of his physician should be prompt and implicit. He should never permit his own crude opinions as to their fitness to influence his attention to them. A failure in one particular may render an otherwise judicious treatment dangerous, and even fatal. This remark is equally applicable to diet, drink, and exercise. As patients become convalescent, they are very apt to suppose that the rules prescribed for them may be disregarded, and the consequence, but too often, is a relapse. Patients should never allow themselves to be persuaded to take any medicine whatever, that may be recommended to them by the self-constituted doctors and doctresses who are so frequently met with, and who pretend to possess infallible remedies for the cure of every disease. However simple some of their prescriptions may appear to be, it often happens that they are productive of much mischief, and in all cases they are injurious, by contravening the plan of treatment adopted by the physician.

§ 7. A patient should, if possible, avoid even the *friendly visits of a physician* who is not attending him—and when he does receive them, he should never converse on the subject of his disease, as an observation may be made, without any intention of interference, which may destroy his confidence in the course he is pursuing, and induce him to neglect the directions prescribed to him. A patient should never send for a consulting physician without the express consent of his own medical attendant. It is of great importance that physicians should act in concert; for, although their modes

of treatment may be attended with equal success when employed singly, yet conjointly they are very likely to be productive of disastrous results.

§ 8. When a patient wishes to dismiss his physician, justice and common courtesy require that he should declare his reasons for so doing.

§ 9. Patients should always, when practicable, send for their physician in the morning, before his usual hour of going out; for, by being early aware of the visits he has to pay during the day, the physician is able to apportion his time in such a manner as to prevent an interference of engagements. Patients should also avoid calling on their medical adviser unnecessarily during the hours devoted to meals or sleep. They should always be in readiness to receive the visits of their physician, as the detention of a few minutes is often of serious inconvenience to him.

§ 10. A patient should, after his recovery, entertain a just and enduring sense of the value of the services rendered him by his physician; for these are of such a character, that no mere pecuniary acknowledgment can repay or cancel them.

OF THE DUTIES OF PHYSICIANS TO EACH OTHER, AND TO THE PROFESSION AT LARGE.

ART. I.—*Duties for the support of professional character.*

§ 1. Every individual, on entering the profession, as he becomes thereby entitled to all its privileges and immunities, incurs an obligation to exert his best abilities to maintain its dignity and honor, to exalt its standing, and to extend the bounds of its usefulness. He should, therefore, observe strictly such laws as are instituted for the government of its members;—should avoid all contumelious and sarcastic remarks relative to the faculty as a body; and while, by unwearied diligence, he resorts to every honorable means of enriching the science, he should entertain a due respect for his seniors, who have, by their labors, brought it to the elevated condition in which he finds it.

§ 2. There is no profession, from the members of which greater purity of character, and a higher standard of moral excellence are required, than the medical; and to attain such eminence, is a duty every physician owes alike to his profession and to his patients. It is due to the latter, as without it he cannot command their respect and confidence, and to both, because no scientific attainments can

compensate for the want of correct moral principles. It is also incumbent upon the faculty to be temperate in all things, for the practice of physic requires the unremitting exercise of a clear and vigorous understanding; and, on emergencies, for which no professional man should be unprepared, a steady hand, an acute eye, and an unclouded head may be essential to the well-being, and even to the life, of a fellow-creature.

§ 3. It is derogatory to the dignity of the profession to resort to public advertisements, or private cards, or handbills, inviting the attention of individuals affected with particular diseases—publicly offering advice and medicine to the poor gratis, or promising radical cures; or to publish cases and operations in the daily prints, or suffer such publications to be made; to invite laymen to be present at operations, to boast of cures and remedies, to adduce certificates of skill and success, or to perform any other similar acts. These are the ordinary practices of empirics, and are highly reprehensible in a regular physician.

§ 4. Equally derogatory to professional character is it for a physician to hold a patent for any surgical instrument or medicine; or to dispense a secret *nostrum*, whether it be the composition or exclusive property of himself or of others. For, if such nostrum be of real efficacy, any concealment regarding it is inconsistent with beneficence and professional liberality; and if mystery alone give it value and importance, such craft implies either disgraceful ignorance or fraudulent avarice. It is also reprehensible for physicians to give certificates attesting the efficacy of patent or secret medicines, or in any way to promote the use of them.

Art. II.—*Professional services of physicians to each other.*

§ 1. All practitioners of medicine, their wives, and their children while under the paternal care, are entitled to the gratuitous services of any one or more of the faculty residing near them, whose assistance may be desired. A physician afflicted with disease is usually an incompetent judge of his own case; and the natural anxiety and solicitude which he experiences at the sickness of a wife, a child, or any one who, by the ties of consanguinity, is rendered peculiarly dear to him, tend to obscure his judgment, and produce timidity and irresolution in his practice. Under such circumstances, medical men are peculiarly dependent upon each other, and kind offices and professional aid should always be cheerfully

and gratuitously afforded. Visits ought not, however, to be obtruded officiously; as such unasked civility may give rise to embarrassment, or interfere with that choice on which confidence depends. But, if a distant member of the faculty, whose circumstances are affluent, request attendance, and an honorarium be offered, it should not be declined; for no pecuniary obligation ought to be imposed, which the party receiving it would wish not to incur.

ART. III.—*Of the duties of physicians as respects vicarious offices.*

§ 1. The affairs of life, the pursuit of health, and the various accidents and contingencies to which a medical man is peculiarly exposed, sometimes require him temporarily to withdraw from his duties to his patients, and to request some of his professional brethren to officiate for him. Compliance with this request is an act of courtesy, which should always be performed with the utmost consideration for the interest and character of the family physician, and when exercised for a short period, all the pecuniary obligations for such service should be awarded to him. But if a member of the profession neglect his business in quest of pleasure and amusement, he cannot be considered as entitled to the advantages of the frequent and long-continued exercise of this fraternal courtesy, without awarding to the physician who officiates, the fees arising from the discharge of his professional duties.

In obstetrical and important surgical cases, which give rise to unusual fatigue, anxiety, and responsibility, it is just that the fees accruing therefrom should be awarded to the physician who officiates.

ART. IV.—*Of the duties of physicians in regard to consultations.*

§ 1. A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner, who has a license to practise from some medical board of known and acknowledged respectability, recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellow-

ship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry.

§ 2. In consultations, no rivalship or jealousy should be indulged; candor, probity, and all due respect should be exercised towards the physician having charge of the case.

§ 3. In consultations, the attending physician should be the first to propose the necessary questions to the sick; after which the consulting physician should have the opportunity to make such further inquiries of the patient as may be necessary to satisfy him of the true character of the case. Both physicians should then retire to a private place for deliberation; and the one first in attendance should communicate the directions agreed upon to the patient or his friends, as well as any opinions which it may be thought proper to express. But no statement or discussion of it should take place before the patient or his friends, except in the presence of all the faculty attending, and by their common consent; and no *opinions* or *prognostications* should be delivered which are not the result of previous deliberation and concurrence.

§ 4. In consultations, the physician in attendance should deliver his opinion first; and when there are several consulting, they should deliver their opinions in the order in which they have been called in. No decision, however, should restrain the attending physician from making such variations in the mode of treatment, as any subsequent unexpected change in the character of the case may demand. But such variation, and the reasons for it, ought to be carefully detailed at the next meeting in consultation. The same privilege belongs also to the consulting physician if he is sent for in an emergency, when the regular attendant is out of the way, and similar explanations must be made by him at the next consultation.

§ 5. The utmost punctuality should be observed in the visits of physicians when they are to hold consultation together, and this is generally practicable, for society has been considerate enough to allow the plea of a professional engagement to take precedence of all others, and to be an ample reason for the relinquishment of any present occupation. But, as professional engagements may sometimes interfere, and delay one of the parties, the physician who first arrives should wait for his associate a reasonable period, after

which the consultation should be considered as postponed to a new appointment. If it be the attending physician who is present, he will of course see the patient and prescribe; but if it be the consulting one, he should retire, except in case of emergency, or when he has been called from a considerable distance, in which latter case he may examine the patient, and give his opinion in *writing*, and *under seal*, to be delivered to his associate.

§ 6. In consultations, theoretical discussions should be avoided, as occasioning perplexity and loss of time. For there may be much diversity of opinion concerning speculative points, with perfect agreement in those modes of practice which are founded, not on hypothesis, but on experience and observation.

§ 7. All discussions in consultation should be held as secret and confidential. Neither by words nor manner should any of the parties to a consultation assert or insinuate that any part of the treatment pursued did not receive his assent. The responsibility must be equally divided between the medical attendants—they must equally share the credit of success as well as the blame of failure.

§ 8. Should an irreconcilable diversity of opinion occur when several physicians are called upon to consult together, the opinion of the majority should be considered as decisive; but if the numbers be equal on each side, then the decision should rest with the attending physician. It may, moreover, sometimes happen, that two physicians cannot agree in their views of the nature of a case, and the treatment to be pursued. This is a circumstance much to be deplored, and should always be avoided, if possible, by mutual concessions, as far as they can be justified by a conscientious regard for the dictates of judgment. But in the event of its occurrence, a third physician should, if practicable, be called to act as umpire; and, if circumstances prevent the adoption of this course, it must be left to the patient to select the physician in whom he is most willing to confide. But, as every physician relies upon the rectitude of his judgment, he should, when left in the minority, politely and consistently retire from any further deliberation in the consultation, or participation in the management of the case.

§ 9. As circumstances sometimes occur to render a *special consultation* desirable, when the continued attendance of two physicians might be objectionable to the patient, the member of the faculty whose assistance is required in such cases, should sedulously guard against all future unsolicited attendance. As such consultations

require an extraordinary portion both of time and attention, at least a double honorarium may be reasonably expected.

§ 10. A physician who is called upon to consult, should observe the most honorable and scrupulous regard for the character and standing of the practitioner in attendance; the practice of the latter, if necessary, should be justified as far as it can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which could impair the confidence reposed in him, or affect his reputation. The consulting physician should also carefully refrain from any of those extraordinary attentions or assiduities, which are too often practised by the dishonest for the base purpose of gaining applause, or ingratiating themselves into the favor of families and individuals.

ART. V.—*Duties of physicians in cases of interference.*

§ 1. Medicine is a liberal profession, and those admitted into its ranks should found their expectations of practice upon the extent of their qualifications, not on intrigue or artifice.

§ 2. A physician in his intercourse with a patient under the care of another practitioner, should observe the strictest caution and reserve. No meddling inquiries should be made—no disingenuous hints given relative to the nature and treatment of his disorder; nor any course of conduct pursued that may directly or indirectly tend to diminish the trust reposed in the physician employed.

§ 3. The same circumspection and reserve should be observed when, from motives of business or friendship, a physician is prompted to visit an individual who is under the direction of another practitioner. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no particular inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

§ 4. A physician ought not to take charge of or prescribe for a patient who has recently been under the care of another member of the faculty in the same illness, except in cases of sudden emergency, or in consultation with the physician previously in attendance, or when the latter has relinquished the case, or been regularly notified that his services are no longer desired. Under such circumstances, no unjust and illiberal insinuations should be thrown out in relation to the conduct or practice previously pursued, which should

be justified as far as candor and regard for truth and probity will permit; for it often happens that patients become dissatisfied when they do not experience immediate relief, and, as many diseases are naturally protracted, the want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge and skill.

§ 5. When a physician is called to an urgent case, because the family attendant is not at hand, he ought, unless his assistance in consultation be desired, to resign the care of the patient to the latter immediately on his arrival.

§ 6. It often happens in cases of sudden illness, or of recent accidents and injuries, owing to the alarm and anxiety of friends, that a number of physicians are simultaneously sent for. Under these circumstances, courtesy should assign the patient to the first who arrives, who should select from those present any additional assistance that he may deem necessary. In all such cases, however, the practitioner who officiates should request the family physician, if there be one, to be called, and, unless his further attendance be requested, should resign the case to the latter on his arrival.

§ 7. When a physician is called to the patient of another practitioner, in consequence of the sickness or absence of the latter, he ought, on the return or recovery of the regular attendant, and with the consent of the patient, to surrender the case.

[The expression, "patient of another practitioner," is understood to mean a patient who may have been under the charge of another practitioner at the time of the attack of sickness, or departure from home of the latter, or who may have called for his attendance during his absence or sickness, or in any other manner given it to be understood that he regarded the said physician as his regular medical attendant.]

§ 8. A physician, when visiting a sick person in the country, may be desired to see a neighboring patient who is under the regular direction of another physician, in consequence of some sudden change or aggravation of symptoms. The conduct to be pursued on such an occasion is to give advice adapted to present circumstances; to interfere no further than is absolutely necessary with the general plan of treatment; to assume no future direction, unless it be expressly desired; and, in this last case, to request an immediate consultation with the practitioner previously employed.

§ 9. A wealthy physician should not give advice *gratis* to the affluent; because his doing so is an injury to his professional bre-

thren. The office of a physician can never be supported as an exclusively beneficent one; and it is defrauding, in some degree, the common funds for its support, when fees are dispensed with which might justly be claimed.

§ 10. When a physician who has been engaged to attend a case of midwifery is absent, and another is sent for, if delivery is accomplished during the attendance of the latter, he is entitled to the fee, but should resign the patient to the practitioner first engaged.

ART. VI.—*Of differences between physicians.*

§ 1. Diversity of opinion and opposition of interest, may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such cases unfortunately occur, and cannot be immediately terminated, they should be referred to the arbitration of a sufficient number of physicians or a *court-medical.*

§ 2. As peculiar reserve must be maintained by physicians towards the public, in regard to professional matters, and as there exist numerous points in medical ethics and etiquette through which the feelings of medical men may be painfully assailed in their intercourse with each other, and which cannot be understood or appreciated by general society, neither the subject-matter of such differences nor the adjudication of the arbitrators should be made public, as publicity in a case of this nature may be personally injurious to the individuals concerned, and can hardly fail to bring discredit on the faculty.

ART. VII.—*Of pecuniary acknowledgments.*

Some general rules should be adopted by the faculty, in every town or district, relative to *pecuniary acknowledgments* from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

OF THE DUTIES OF THE PROFESSION TO THE PUBLIC, AND OF THE OBLIGATIONS OF THE PUBLIC TO THE PROFESSION.

ART. I.—*Duties of the profession to the public.*

§ 1. As good citizens, it is the duty of physicians to be ever vigilant for the welfare of the community, and to bear their part in sustaining its institutions and burdens; they should also be ever

ready to give counsel to the public in relation to matters especially appertaining to their profession, as on subjects of medical police, public hygiene, and legal medicine. It is their province to enlighten the public in regard to quarantine regulations—the location, arrangement, and dietaries of hospitals, asylums, schools, prisons, and similar institutions—in relation to the medical police of towns, as drainage, ventilation, etc.—and in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering, even at the jeopardy of their own lives.

§ 2. Medical men should also be always ready, when called on by the legally constituted authorities, to enlighten coroners' inquests and courts of justice, on subjects strictly medical—such as involve questions relating to sanity, legitimacy, murder by poisons or other violent means, and in regard to the various other subjects embraced in the science of Medical Jurisprudence. But in these cases, and especially where they are required to make a *post-mortem* examination, it is just, in consequence of the time, labor, and skill required, and the responsibility and risk they incur, that the public should award them a proper honorarium.

§ 3. There is no profession by the members of which eleemosynary services are more liberally dispensed than the medical, but justice requires that some limits should be placed to the performance of such good offices. Poverty, professional brotherhood, and certain of the public duties referred to in the first section of this article, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by rich individuals, societies for mutual benefit, for the insurance of lives or for analogous purposes, nor any profession or occupation, can be admitted to possess such privilege. Nor can it be justly expected of physicians to furnish certificates of inability to serve on juries, to perform militia duty, or to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without a pecuniary acknowledgment. But to individuals in indigent circumstances, such professional services should always be cheerfully and freely accorded.

§ 4. It is the duty of physicians, who are frequent witnesses of the enormities committed by quackery, and the injury to health and even destruction of life caused by the use of quack medicines, to enlighten the public on these subjects, to expose the injuries

sustained by the unwary from the devices and pretensions of artful empirics and impostors. Physicians ought to use all the influence which they may possess, as professors in Colleges of Pharmacy, and by exercising their option in regard to the shops to which their prescriptions shall be sent, to discourage druggists and apothecaries from vending quack or secret medicines, or from being in any way engaged in their manufacture and sale.

ART. II.—*Obligations of the public to physicians.*

§ 1. The benefits accruing to the public, directly and indirectly, from the active and unwearied beneficence of the profession, are so numerous and important, that physicians are justly entitled to the utmost consideration and respect from the community. The public ought likewise to entertain a just appreciation of medical qualifications; to make a proper discrimination between true science and the assumptions of ignorance and empiricism—to afford every encouragement and facility for the acquisition of medical education—and no longer to allow the statute-books to exhibit the anomaly of exacting knowledge from physicians, under a liability to heavy penalties, and of making them obnoxious to punishment for resorting to the only means of obtaining it.

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AMERICAN MEDICAL ASSOCIATION.

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1847-48.

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1848-49.

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1849-50.

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1850-51.

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1851-52.

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1852-53.

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1853-54.

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1854-55.

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1855-56.

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1856-57.

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1857-58.

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1858-59.

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1859-60.

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1860-63.

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1863-64.

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1864.

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F. E. B. HEINTZE, M. D., *Maryland.*

1865.

BOSTON.

The Constitution having been amended, the same officers presided also at Boston. (Vide *Transactions*, vol. xv. p. 50.)

1866.

BALTIMORE.

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D. HUMPHREYS STORER, M. D., *Massachusetts.*

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1867.

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1868.

WASHINGTON.

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DAVID W. YANDELL, M. D., *Kentucky.*
HORATIO ROBINSON STORER, M. D., *Massachusetts.*

OFFICERS FOR 1869.

NEW ORLEANS.

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S. M. BEMISS, M. D., *Louisiana.*

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ASSISTANT SECRETARY.

A. J. SEMMES, M. D., *Louisiana.*

TREASURER.

CASPAR WISTER, M. D., *Pennsylvania.*

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